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THE UNIVERSITY OF ALBERTA

A CASE STUDY OF THE SUCCESS OF SETTLEMENT  
IN A SOUTHERN PEACE RIVER DISTRICT

by



CARLYLE B. A. ROSS

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES  
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UNIVERSITY OF ALBERTA  
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The undersigned certify that they have read, and  
recommend to the Faculty of Graduate Studies for acceptance,  
a thesis entitled A Case Study of the Success of Settlement  
in a Southern Peace River District submitted by Carlyle B.A.  
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degree of Master of Science,



## ABSTRACTS

Homesteading, first introduced into Canada in 1872, is still the mainstay of Alberta government land settlement policies. At the present time, the relevance of homesteading to land development is being questioned.

In 1967 a survey was initiated in I.D. 126 in the southern fringe of Peace River. The object of this study was to determine the farming problems confronting homesteaders, to ascertain whether current homesteading policies were conducive to farm success, to identify the factors associated with farm success, and to suggest ways of improving homesteading.

The soils of I.D. 126 are of low productivity and the climate is unfavourable for farming. Indeed the location is less suitable to farming than Central Peace River. However, farms in the area appear to be performing slightly better than the average for Peace River.

The main farming problems as seen by the farmers questioned were lack of capital, poor weather, and insufficient land. Problems of a general nature included the high cost of machinery, the cost-price squeeze, poor marketing facilities and lack of infra-structure.

Sample farms were classified into four subsets - Civilian Homestead Sale, Civilian Homestead Lease, Veteran Homestead Lease and Non-Homesteaders. In general Veteran homesteaders emerged as the best performers. They had substantially more formal education and nonfarm experience than any other group. Like Non-homesteaders, they began farming with





substantially more capital and improved land than their civilian counterparts. They had access to more capital than civilian homesteaders. Consequently Veteran homesteaders were able to establish their farms relatively quickly.

Non-homesteaders were still expanding and establishing their holdings at the time of the survey. These operators appear to be big farm developers. Most of their income was being reinvested into farm development thereby taking advantage of income tax concessions.

The Civilian Homestead group was farming in the area for the longest time period. Yet the level of farm and family incomes barely approximated incomes of Veteran homesteaders. The same observation holds for total assets and net worth. These operators were less educated and made limited use of non-equity capital. Considering the length of time that they were farming, their performance was relatively poor. The Homestead Sale group have just begun farming. Therefore the survey results show rather uneven progress.

As a result of the performance of the Civilian homesteaders, the study concluded that the stated hypotheses could not be rejected. In short the civilian homestead policy does not allow for efficient use of private and public resources. Hence there is need for a comprehensive study of the concept of homesteading in the hope of reinvigorating the practice if there is a genuine desire to keep homesteading going.



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## Chapter I

### INTRODUCTION

The practice of homesteading has served a very useful purpose in settling the Western Provinces. Alberta continues to use this practice to develop the Peace River country. The question being raised today<sup>1</sup> is whether in its present form homesteading has not outlived its usefulness.

Over the years, the objectives of homesteading policies have been changing. Initially, the practice of homesteading was introduced to establish and maintain the territorial integrity of Canada. Once the threat of United States territorial ambitions receded, economic considerations were advanced to justify continuation of the practice. The Dominion government envisaged agriculture on the Prairies as making a valuable contribution to the national economy. Thus the objective of homesteading was to boost agricultural production. At all times homesteading was a national concern.

In the 1940's, an attempt was made to reduce the rate of settlement thereby preserving lands for future generations of Albertans. Yet after World War II when many war veterans were returning to civilian life, homesteading was used to aid absorption of veterans to civilian life. In order to make this transition fast, easy and successful, veteran homesteaders received special consideration, e.g. land grants, capital and training. The Wanham or Lassiter Project was created primarily

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<sup>1</sup>Editorial, Edmonton Journal, April 2, 1968, p. 4.





for veterans. Yet, for several reasons not fully documented, this veritable land mark in the field of homesteading failed.

As a result of a thinkers' conference in 1956,<sup>1</sup> a homestead sale policy was introduced. Instead of taking the legal form of a lease the contract now took the form of a conditional purchase contract. Like the lease, this contract may not be accepted as collateral security for loans by lending institutions. The new policy places more demands on the operator; he is now responsible for land taxes and he has to pay the purchase price of the land.

It is not clear whether current homesteading policies are aimed at encouraging or discouraging homesteading. The deceptively easy cultivation duties of the policy reinforce the belief that homesteading is a relatively easy way of making a living. In this regard one can say that the policy encourages rather than discourages homesteading.

It is of great importance to recognize that most of the productive lands have already been settled. Hence, all future settlement will be concentrated in the rather harsh and relatively unproductive Peace River country. Settlers in the area are therefore placed at a comparative disadvantage to operators in the more productive parts of the Province.

Since farmers in the Peace River are operating under limiting conditions maximum efficiency in the use of controllable factors of production becomes crucial. It is therefore essential that the entire concept of homesteading be examined and the efficiency of resource use be assessed with the aim of increasing the chances of farm success.

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<sup>1</sup>Alberta Department of Lands and Forests, Annual Report for the Year Ending March 31, 1957 (Edmonton: Queen's Printer, 1957).



### Objectives

This pioneering study was initiated by the Department of Agricultural Economics, University of Alberta. Its main objectives are as follows:

1. to determine the problems confronting homesteaders in an active area of settlement,
2. to determine whether current homesteading policies are conducive to the efficient use of private and public resources,
3. to determine the factors associated with farm success, and
4. to suggest ways of improving homesteading.

It is hoped that the findings of this study will point the way to future research, and will make a contribution to improving land settlement policies in Alberta.

### Hypotheses

The main hypotheses are:

1. Nonfarm training or experience and years of schooling enhance farm success.
2. Initial supply of productive resources is crucial to farm success.
3. The Civilian homestead policy impedes the flow of capital to the farm thereby hindering farm success.
4. Civilian homesteading policy forces operators to neglect farming to supplement farm income with nonfarm income.
5. Efficient use is not being made of private and public resources by non-veteran homesteaders,

### Source of Data

The Department of Agricultural Economics conducted a field survey during the summer of 1967 in Valleyview, a district in the Peace River



country. About 100 local farmers were interviewed on family characteristics and their farming operations. Additional data were collected from files and annual reports of the Department of Lands and Forests, the Edmonton Land Titles office and the Dominion Bureau of Statistics census reports.





## Chapter II

### A SHORT HISTORY OF HOMESTEADING

#### The Dominion Government and Homesteading, 1872 - 1930

The settlers learned the hard way that they were on the borderline of grain production. They had watched, faces tense with anxiety, the race between the frost and their fields of slowly ripening Red Fife wheat. Many of them had come to know what it felt like to see their crop wither under a brazen sky. Some had seen their waving wheat battered into the ground in twenty minutes by a Niagara of hail. Later they learned what it meant to have black stem rust snatch the crop from their grasp just as they reached out to garner it.

But the winning of the West exacted a still more poignant toll from many a pioneer family. Many a young mother lies beneath the prairie sod because when her hour of trial came proper medical care was not available. And many a lovely child died in its mother's arms because it took so long, so terribly long, for the doctor to make the journey. Empires were not won without tears, even in times of peace. It took more than a ten dollar filing fee to claim title to a half mile square of the prairie's featureless face. The price paid included sweat and tears and privation and loneliness and the cramped discomfort of a one room shack. It took courage and fortitude and endurance.<sup>1</sup>

Homesteading had its inception in the United States in 1862. Ten years later, the practice was introduced into Canada with some modification. In general, it can be said that land settlement policies of 1872 and thereafter closely paralleled those in the United States.

As in the United States the East was already settled; therefore, expansion had to move to the Pacific coast. The railways and homesteading were the main means of rapid settlement. Unlike in the United

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<sup>1</sup>R.D. Colquhette, The First Fifty Years, (Winnipeg: The Public Press Limited, 1957), p. 6.





States where homesteading was bitterly opposed by sectionalism, introduction of such a policy in Canada received near unanimous support.

Transportation was crucial to settlement and the railway became indispensable. Just at a time when the railway land grant was being discarded in the United States, it was introduced in Canada as the most feasible machinery for rapid railway development.

In the United States title to lands included surface and mineral rights. After 1883 the Canadian government made a clear distinction between surface and mineral rights, whether solid, liquid, or gaseous. Since Alberta was virtually unsettled before 1883, practically all mineral rights have been retained by the government.

In the West (save in Manitoba) land survey preceded settlement. This survey greatly facilitated future identification and transfer of lands. Moreover, the problem of squatting was negligible as compared with the United States.

The forces propelling Canada to adopt the practice of homesteading, differed from those which motivated Congress to enact the law. There were no problems of tariffs, slavery and sectionalism, and by means of the treaties concluded with the Indian tribes in former Rupert's Land since 1871,<sup>1</sup> and the presence of the Northwest Mounted Police peaceful settlement was assumed. Rather, the Dominion government was convinced that Congress would do everything short of war to seize lands from Canada.<sup>2</sup> Thus the Manitoba Act of 1870 and the Homestead Act of 1872

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<sup>1</sup>Reproduced by the Provincial Committee on Minority Groups (Premier T.C. Douglas, Chairman) The Treaties Between Her Majesty Queen Victoria, and the Indians of British North America, (Regina, March 1961).

<sup>2</sup>Arthur Morton, and Chester Martin, History of Prairie Settlement and 'Dominion Lands' Policy (Toronto: The Macmillan Company of Canada Ltd., 1938), p. 225.



were aimed at rapid settlement of the West. This settlement would have increased Canadian control of the West, simultaneously discouraging United States territorial ambitions. By 1900 when the threat receded, economic reasons were advanced for exploiting the West.<sup>1</sup>

As in the United States 160 acres was regarded as an economic unit. Any person 21 years and above or the head of a family was entitled to apply for homestead entry. The applicant had to prove that he did not have another homestead, that to the best of his knowledge no one was residing on the quarter section being sought, and that he was a bona fide farmer. Other stipulations included a \$10 entry fee, residence of 6 months in each of three consecutive years, and improvement duties including the erection of a habitable dwelling. Only British subjects by birth or naturalization were eligible for title, which was issued after three years.

Several changes were made in the Act, most of which were aimed at facilitating and accelerating settlement. In 1874 the eligible age was reduced from 21 to 18 years; in 1876 any woman who was the breadwinner in a family became eligible to apply for homestead entry.

The principle of preemption was first introduced by the Canadian Pacific Railway (C.P.R.). Since the railway was interested in rapid but permanent settlement, odd numbered quarter sections were sold only to established operators. Advantages of this practice prompted the government in 1874 to acknowledge the principle of preemption. The latter was formally defined in the Dominion Lands Act of 1883. It enabled the operator to acquire the adjoining quarter section at a nominal fee, if title had already been received on the homestead. This practice assumed

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<sup>1</sup>Ibid., p. 402.





great significance in arid and semiarid areas; it also served to deter massive speculation.

In addition to preemption, settlers who had title or were about to obtain title, could obtain a second homestead entry. This measure which was first introduced in 1908 was phased out in 1939.

Amendments to the Homestead Act of 1876 permitted private companies to settle land within the framework of the homestead policy. The Act specified that settlement must not exceed one family per alternate quarter section.

To further increase the flow of settlers, a lien was placed against the homestead to enable companies to recover up to \$200 in costs for passage and other incidental expenses. Although many companies came into being, they failed to attract any significant number of settlers.<sup>1</sup> Religious organizations were also permitted to settle land as a group of twenty or more families per hamlet.

Cultivation duties were clearly stated for the first time in 1884. Ten acres were to be prepared for cropping in the first year; in the second year 15 acres were to be broken and ten acres cropped; in the third year 15 acres were to be broken and 25 cropped.

Shipping companies were contracted to bring in settlers. Sons could fulfill the 6 months' residence requirements by living at home. Immigrants were lured mainly from Britain and her territories, the United States and Europe, and between 1900 and 1915 settlement increased markedly.

Crop failures were becoming very prevalent in certain southern

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<sup>1</sup>Robert England, The Colonisation of Western Canada (London: King and Sons, Ltd., 1936), p. 59.



areas of Alberta and Saskatchewan. The Dominion Lands Act was amended to permit homesteaders to abandon their holdings where crop failure persisted, in favour of more suitable lands elsewhere. Large-scale irrigation projects were created in southern Alberta by both the government and the C.P.R.. By 1925, 257,432 acres were irrigated.<sup>1</sup> But the drought situation remained problematic since few of the settled lands were irrigated.

The Minister of Interior was authorized to withdraw from sale or settlement any areas deemed unsuitable for settlement (1895). Yet as Wood reports, this prerogative was not enforced.

Even during this period of rapid expansion and of relative prosperity drought and crop failures were experienced which necessitated distribution of seed grain. It was also during this period of relatively good prices and favourable moisture conditions, especially from 1910 to 1915, that most of the arid portions of southeastern Alberta were settled with disastrous results. The settlement of this area was certainly not discouraged and in fact was encouraged by both the dominion government and railway companies.<sup>2</sup>

During the first world war settlement slackened due to the decline in immigration and the absorption of Canadian males into the war effort. A Soldier Settlement Board was created in 1917. The purpose of this Board was to facilitate rapid settlement of war veterans.

Loans of up to \$7,500 were made available for purchases of land, stocks and equipment, and farm improvements. The Act of 1919 specified that a veteran must have previous farming experience before he could obtain a homestead. When experience was lacking, he was advised to work on a farm until the necessary experience was gained. Until May, 1921, men were paid while they attended courses organized and maintained

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<sup>1</sup>Morton, and Martin, op. cit., p. 146.

<sup>2</sup>V.A. Wood, "Public Land Policy for Alberta," (unpublished Ph. D. thesis, University of Minnesota, 1953), p. 50.





by the Board. After 1921 the practical experience required was equivalent to that of a hired farm hand.<sup>1</sup> Soldiers also received an outright grant of 160 acres. This did not preclude them from taking out homesteads.

Seed grain was granted to homesteaders in 1886 and thereafter where crop failures were persistent. With the assistance of the C.P.R. excursions were arranged to Indian Head Experimental Farm (1904). Between 1900 and 1904 purebred animals were imported from the East at a very nominal cost to the homesteader. Quite often transportation costs were subsidized by the government and the railway.

When the Provinces of Alberta and Saskatchewan were created in 1905, both Provincial and Federal governments cooperated in agricultural education and research. The Federal government had already indicated the role of government in agriculture.

Many of the immigrants had never been on a farm; many had come with antiquated traditions of farming; too many were content with any sort of livestock at all. It will be seen that the territorial government passed on to the Provincial Government, its successor, the tradition that it was the prime duty of the local administration to train an untutored people in methods of field and animal husbandry, so as to enable them to secure produce of high standards for the world market.<sup>2</sup>

Alberta took up the challenge. In 1911 six demonstration farms with agricultural schools were proposed for Medicine Hat, Claresholm, Olds, Sedgwick, Vermilion, and Stony Plain. The schools were to train the sons and daughters of farmers in the arts of farming and homemaking. The farms were to provide the practical experience and also demonstrate to farmers a more scientific approach to farming. However, only three schools came into being - Claresholm, Olds, and Vermilion. District Agriculturists were also appointed to inform and advise operators on

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<sup>1</sup>England, op. cit., p. 76.

<sup>2</sup>Morton, and Martin, op. cit., p. 134.



new advances in science and technology as they affected farming.

Various excursions to experimental farms, exhibitions, and competitions were arranged. There were seed fairs, poultry shows, and livestock and standing grain competitions. Since mixed farming appeared to be the most appropriate insurance against the vagaries of the weather, operators were encouraged to raise livestock. Breeding stock was made available to farmers. The government acquainted poultry growers with procedures for candling and grading eggs and supplied them with pure-bred stock from the government poultry farm. Turkeys became quite popular in the Peace River, where the longer summer days permitted them to grow to heavier weights. The government also undertook to store and sell cream for the creameries if they so desired.

Finally in 1930 control of the natural resources was transferred to the Prairie governments. With this transfer, homesteading came under the jurisdiction of the Provincial governments. As will be shown in the succeeding section the Provincial government inherited many incipient problems as a result of previous homesteading policies. However, Wood stresses that the ill effects of previous policies were more than offset by their beneficial effects.<sup>1</sup>

#### Homestead Policy of the Provincial Government

##### The First Decade, 1930 - 1939

It is safe to say that the chief problem of the provinces in assuming so belatedly the control of their lands will be not the 'movement' of a great migration to the frontier but the slow and toilsome task of appraising the varied physiographical and economic conditions to be found in Western Canada and of adjusting or readjusting more permanently a pioneer population to them.<sup>2</sup>

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<sup>1</sup>Wood, op. cit., p. 54.

<sup>2</sup>Martin, op. cit., p. 433.





One major drawback of the Dominion Land Policies was their implicit assumption that the West was uniform in climate and soil type. As it turned out 160 acres, and even 320 acres, were insufficient in the arid and semiarid areas. Irrigation works in southern Alberta were designed for absolute drought conditions, but these areas suffer from partial rather than absolute drought.

Geographical dispersion of settlement denied communities the necessary tax base as a source of revenue to provide needed service facilities e.g. roads, electricity, and schools. This condition was further aggravated by the fact that the control of the natural resources by the Dominion government deprived the Province of the opportunity of using land as a source of revenue.

To farmers, lack of capital was a perennial problem. Railway construction was a valuable source of off-farm income for many operators. Yet many farmers were so burdened with taxes that foreclosures were very common.<sup>1</sup>

As homesteaders moved from shortgrass prairie into the parklands and bush country, lack of capital became more acute. This was especially so since operators would have had to farm a larger acreage to secure a reasonable level of living. With the possible exception of veteran homesteaders who had greater access to capital, most operators were short on capital so necessary for land clearing and the purchase of additional land, equipment, and improved seed and livestock. The homestead lease was of little value as collateral. Furthermore, little was known of the grey wooded soils and the best method of handling them to increase their productivity. The Province thus faced the

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<sup>1</sup>Taxes were charged from the time entry was granted.



formidable task of rectifying the ills of previous land settlement policies, especially in the marginal areas. In addition, the Provincial government took over the administration of public lands in the midst of the depression, which was not to end until World War II.

The first Provincial Lands Act of 1931 differed little from that of the Dominion. An individual had to spend at least 3 years in the Province before his application was accepted. Any British subject or prospective subject, male or female, 17 years of age and over, was eligible.

One notable departure should be recorded. The realization that some southern areas of the Province were of low productivity finally evoked some action. Entry south of a line through Ponoka and Hardisty was partially restricted to residents of that area, since it was assumed that they would be better able to cope with the drought conditions. Furthermore, this restriction allowed for some expansion in farm size.

During the period 1930-39 cancellations were rife. The depression had greatly aggravated the shortcomings in the Provincial Lands Act. The need for change became more obvious. As a result, in 1939 the homestead lease was abolished and replaced by an agricultural lease.

The Annual Report of the Department of Lands and Mines (1940) summarized the contribution of homesteading in the following manner:

It had its virtues and its drawbacks. The virtues were represented by a large number of settlers, in spite of pioneering discouragements, becoming permanently established, by the opening up and developing of the province, and by economic benefits resulting from the needs and demands of an increased population. The drawbacks were demonstrated by injudicious choice of quarter sections, which were either unsuitable for agriculture or were situated too far from the railway, by lack of capital at the start to offset the prospect of permanent settlement and by other adverse features embodying land speculation, cancellations through failure to meet taxes and other conditions





which proved detrimental to both settler and the government.<sup>1</sup>

Homestead Policies, 1939 - 1967

The new lease had several refinements. An individual could apply for 320 acres of adjoining land. On receipt of the application the site was examined by a soil inspector. In his evaluation, he reported the value of the land, tree cover, cost of clearing and breaking, accessibility, topography, fordable streams, and any other conditions influencing settlement. Entry was recommended only when at least 50 percent of the unit was cultivatable and the cost of preparing the land for seed did not exceed \$6.00 per acre. Occasionally settlement was recommended in conjunction with adjoining lands.

All applications were to be accompanied by a \$5.00 fee. The cultivation duties were as follows:

	To Break (acres)	Total Crop (acres)
1st year	5	-
2nd year	10	5
3rd year	10	15
4th year	15	25
5th year	15	40
6th year	25	55

The lease was granted for 20 years, renewal being conditional on satisfactory performance of cultivation and residence duties. A one-eighth crop share was collected after the first three crop years. This crop share included both rent and taxes. By collecting the tax after the operator was established and by allowing the magnitude of the tax to fluctuate with crop yields, one of the main factors contributing to failure was being minimized. (Soil maps and soil classifications were also made available to the operator.)

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<sup>1</sup>Alberta Department of Lands and Mines, Annual Report for the Year Ending March 31, 1940 (Edmonton: Queen's Printer, 1940), p. 11.



Once all obligations were met, title could be acquired after 10 years. The sale price amounted to the value of the land as assessed prior to entry. In 1942 both husband and wife could take out homesteads provided the leases were not more than three miles apart. Residence was possible on any of the two units.

During and after World War II many veterans were returning to civilian life. It became necessary to accelerate this transition in as smooth a manner as possible. It was also necessary to ensure that enough land was available to those who wanted to farm. Hence applications for homestead entry in Peace River were restricted to individuals who were resident in the Province on January 1, 1944. A further modification was introduced whereby individuals had to reside in the Province for two years before they were eligible for entry. This amendment was aimed at reducing the rate of settlement and providing newcomers with experience in Alberta weather conditions.

The veteran was not subject to the minimum residence requirement. He could obtain a lease for 320 acres regardless of his current land holdings. The application fee was waived. Where irrigation water was available, he could purchase up to 160 acres of land at \$10.00 per acre. However, on such land he was responsible for taxes, water rates, and other charges assessed against the land. Where lands had been previously cultivated, he paid a one-third crop share for 7 years, after which time he paid the normal one-eighth crop share (1946). Title was obtainable after the 10 years once all duties were up to date. The purchase price was waived for veterans thereby making the transaction somewhat of a land grant.

In 1948 the waiting period before title could be granted to the





veteran (and also the non-veteran) was reduced from 10 to 5 years. At the end of five years he could purchase the homestead for \$1.60 per acre for the first 160 acres and \$1.25 per acre for each additional acre up to 320 acres. However, for each year of residence completed after the first 5 years, the purchase price declined by 20 percent. Therefore, at the end of 10 years title was granted free of charge.

Veterans also received financial assistance. They were eligible for loans under the Veteran Land Act. This Act also allowed for grants of up to \$2,320.

Wanham or Lassiter Project: Under the Veterans Land Act a unique policy was adopted in 1945. Contracts were signed with a few companies to clear, break and prepare for seeding several thousand acres in 80 townships in the Tangle Area.

Veterans received priority in this project, although non-veterans benefitted as the number of applications from veterans declined. The size of each unit was 320 acres, 250 acres of which had to be cultivated. A one-quarter crop share was charged, and title was obtainable after 10 years.

By 1954 it became obvious that homesteaders were failing in spite of the assistance given them by the government. Demand for lands was on the decline and no further clearing and breaking contracts were negotiated. Even in the Wanham Project failures were quite common. The 1956 Annual Report suggested lack of capital as the greatest impediment to successful settlement.<sup>1</sup>

A conference was called by the Lands Division in December 1956 to

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<sup>1</sup>Alberta Department of Lands and Mines, Annual Report for the Year Ending March 31, 1947 (Edmonton: Queen's Printer, 1947), p. 115.



discuss and formulate land settlement policies. Representatives from the Departments of Agriculture and Municipal Affairs, Forestry Division, University of Alberta, and Economics Branch of the C.D.A. attended. Emerging from this conference was the homestead sale policy.

The homestead sale is a conditional purchase contract; the homesteader could obtain title of up to three-quarters of a section within 5 years, other requirements having been met (e.g. payment of purchase price). Unlike the lease, residence duties on or within the vicinity of the homestead were not enforced. However, like the lease, the purchase contract was not accepted as collateral by mortgage companies.

The Minister interviewed all operators on the Wanham Project whose accounts were deficient. Most operators agreed to convert their lease to purchase contracts, i.e. homestead sales. The purchase price was reduced from \$25 to \$15 per acre, and interest charges were cancelled except on overdue balances.

In 1958 the Provincial Cabinet requested an investigation of the Wanham Project with the hope of ameliorating the plight of the settlers - Peace River had recorded drought for consecutive years. As a result of the investigation the land was reclassified and appraised, and all purchase contracts were adjusted to the new valuation. Eighty-one units were deemed unsuitable for settlement and 14 of these settlers agreed to transfer their units back to the government and leave the area.<sup>1</sup>

Interest in homestead sales increased considerably during the early 1960's. Suggested reasons for the upsurge in interest include the scarcity of land and drought in southern Alberta. The highway program made

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<sup>1</sup>Alberta Department of Lands and Mines, Annual Report for the Year Ending March 31, 1959 (Edmonton: Queen's Printer, 1959 ), p. 10.





more land in the north accessible. School lands were also opened to settlement in 1962. The market for grain was very good. More important, most of the homestead sales represented lease conversions thereby exempting the operator from residence duties. The 1960 Annual Report suggests that 50 percent of the homestead sales were converted homestead leases.<sup>1</sup>

By 1963 suspicion concerning land speculation under the homestead sale was very strong. To counteract land speculation, legislation was passed stating that operators must become bona fide farmers before title could be granted. Finally, in 1964 the homestead lease was abolished altogether and residence requirements were inserted into the homestead sale contracts.

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<sup>1</sup>Alberta Department of Lands and Mines, Annual Report for the Year Ending March 31, 1960 (Edmonton: Queen's Printer, 1960), p. 11.



### Chapter III

#### DESCRIPTION OF SURVEY AREA

The survey area, I.D. 126, was selected for several reasons. These reasons include the fact that I.D. 126 is an active area of settlement with farms in several stages of development. It is a marginal farming area with fair to poor soils. The costs of clearing and breaking are relatively high. Moreover, it is readily accessible from Edmonton.

#### Location

The survey area, I.D. 126, is located in Census Division 15, 215 miles northwest of Edmonton on Highway 43. It is bounded on the east by range 19 west of the Fifth Survey Meridian (approximately 117°W), on the west by the Smoky River, on the south by township 67, and on the north by the Smoky River and township 74. (See Figures I and II.) The area has good road service but lacks railroad services.

#### Climate

I.D. 126 forms part of the Southern Peace River Fringe climatic zone<sup>1</sup> exhibiting moderately warm summers and relatively cold winter. Temperatures average 25°F over the year and 35 - 50°F during the growing season.<sup>2</sup>

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<sup>1</sup>L.I. Chapman and D.M. Brown, The Climates of Canada for Agriculture, Report #3, The Canada Land Inventory (Ottawa: Canada Department of Forestry and Rural Development, 1966), p. 22.

<sup>2</sup>Canada Department of Transport, Temperature Normals for Alberta, CDS No. 9-64 (Toronto: Climatology Division, Meteorological Branch, 1964).



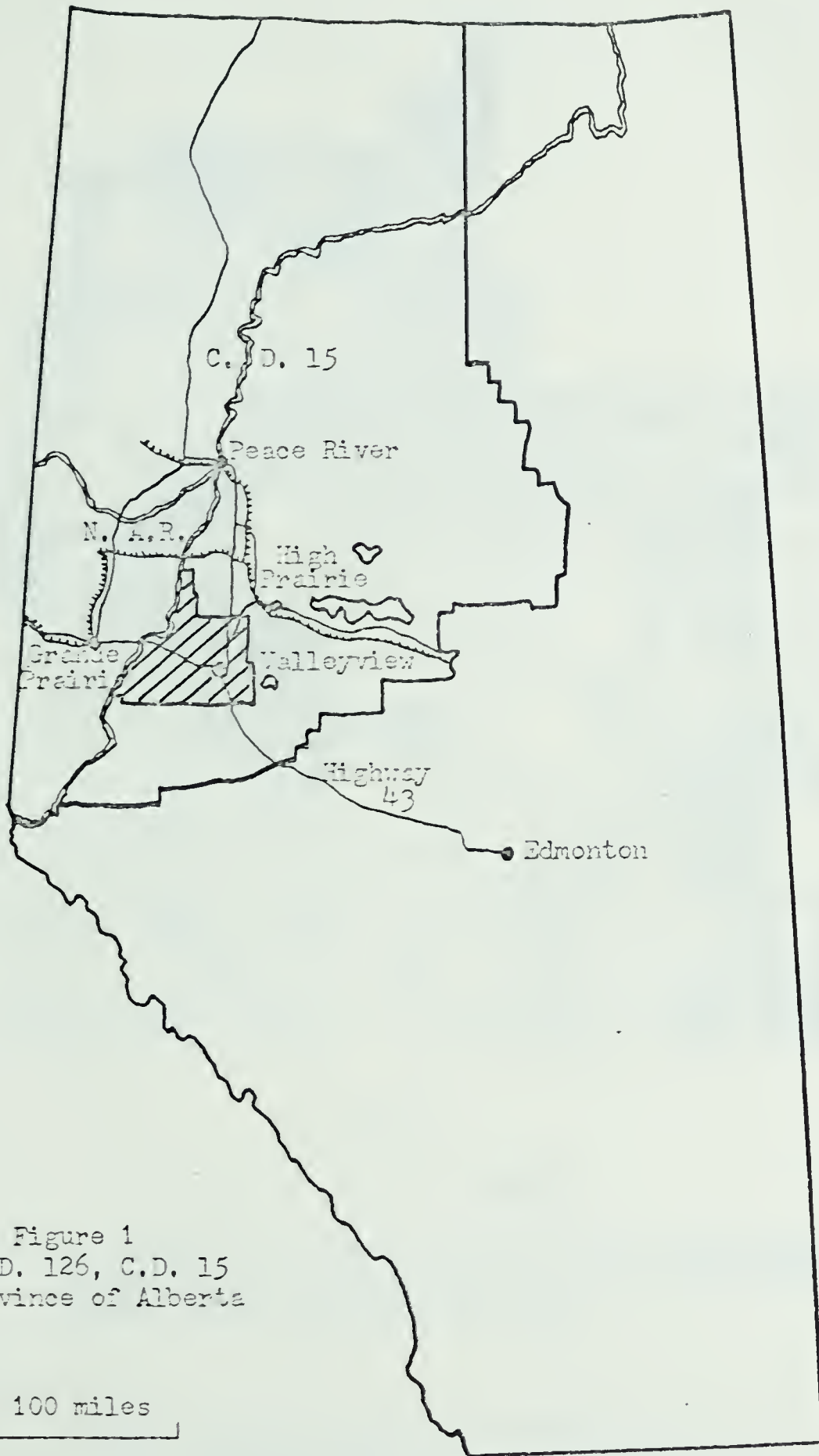


Figure 1  
I.D. 126, C.D. 15  
Province of Alberta





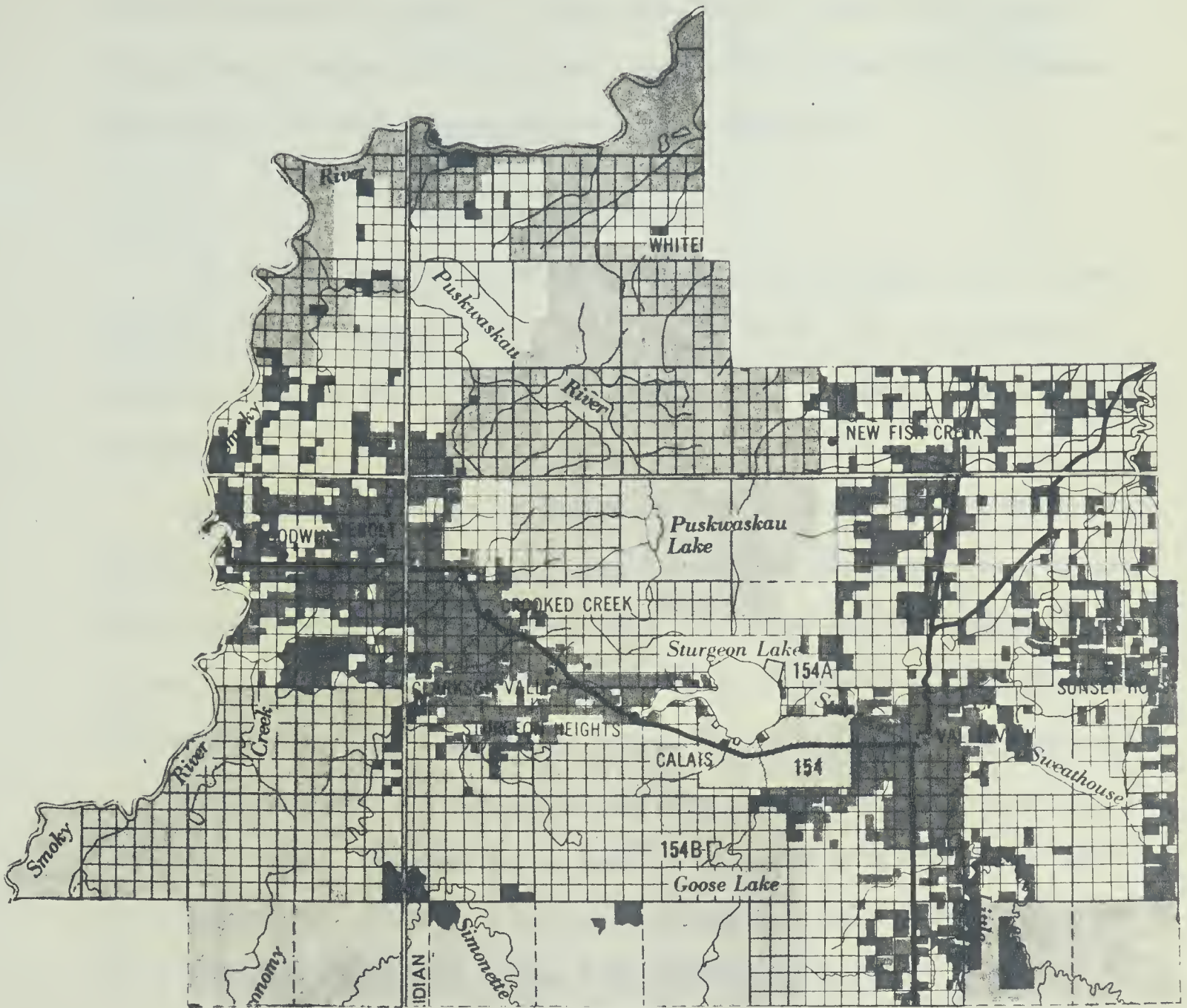


Figure 2

I.D. 126, C.D. 15, ALBERTA

Source: Wm. Odymsky, C.D. Sawyer and V.A. Wood, Public Lands Open for Settlement in the Peace River District, Alberta, Alberta: Queen's Printer, May 1964.

Black - Lands under active settlement.  
 White - Lands available for disposition.  
 Grey - Lands withdrawn from settlement.





Western areas enjoy more warm days than areas in the east (Table 1). The length of growing season and frost-free days are two factors which influence the kinds of crops grown in the area. The southern fringe has a longer growing season than Central Peace River, however, the frost-free period is relatively short (Table 2).

### Physical Features

The survey area is situated in the grey wooded soil zone. It has an area of 2,304 square miles or 1,474,560 acres, 50 - 60 percent of which is arable. The dominant soil rating is 5 - fair to fairly good arable.<sup>1</sup>

In the east drainage is facilitated by the Little Smoky River with its main tributaries - Sturgeon and Sweathouse Creeks and Goose River. The western region is drained by the Smoky River and its main tributaries - Simonette and Puskwaskau Rivers. The Smoky travels north where it is joined by the Little Smoky before discharging into the Peace River.

Several lakes dot the area. Sturgeon, Puskwaskau, and Goose lakes are the largest. The fishing is good in Sturgeon Lake which receives a constant flow of water from permanent springs and streams. Sturgeon Lake also supplies water to the town of Valleyview.

Although much of the native vegetation has been destroyed by land clearing and forest fires, most of the area varies from a light to medium cover. Bringing these lands into agricultural production involves high costs of clearing. Marketable spruce and pine are found in the Puskwaskau and Crooked Creek areas.<sup>2</sup>

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<sup>1</sup>Wm. Odynsky, A. Wynnyk, and I.D. Newton, Soil Survey of the Grande Prairie and Sturgeon Lake Sheets, Report #18, Alberta Soil Survey (Alberta: Alberta Dept. of Extension, University of Alberta, 1956), p.36.

<sup>2</sup>Ibid., p. 22.



Table 1

SEASONAL AND ANNUAL TEMPERATURE NORMALS, (°F)

Month	High Prairie	Grande Prairie	Beaver- lodge
May	36.9	38.4	38.3
June	43.3	45.4	44.4
July	47.8	48.8	48.1
August	44.6	47.2	45.6
September	37.0	38.6	39.0
Annual Average	22.9	24.2	25.7

Source: Temperature Normals for Alberta, Toronto: Climatology Division, CDS #9-64, December 28, 1964.

Table 2

DEGREE-DAYS ABOVE 42°F, POTENTIAL EVAPO-TRANSPIRATION,  
GROWING SEASON AND FROST-FREE PERIOD

	Degree-Days <sup>a</sup> above 42°	Potential <sup>b</sup> E.T. (inches)	Growing <sup>c</sup> Season (days)	Frost-Free <sup>d</sup> Period (days)
Central Peace River	2050	20.5	135	85
Southern Fringe Peace River	2000	20	163	70
Edmonton	2150	21	172	90

Source: ARDA, The Canada Land Inventory, Report #3 (Ottawa: Queen's Printer, 1966), p. 20 and 22.

<sup>a</sup>Degree-days is the accumulated number of degrees above 42°F between the first 42° recorded in the spring and the last 42° recorded in the fall.

<sup>b</sup>Potential Evapo-Transpiration is a measure of water need of plants. It is defined as the water lost through evaporation from the soil and transpiration from dense tree cover.

<sup>c</sup>Growing season is the number of days between the last 42°F recorded in the spring and the first 42°F recorded in the fall. Essentially it is the number of days between the last killing frost in the spring and the first killing frost in the fall.

<sup>d</sup>The number of days that are frost-free between the mean spring and fall frost dates.



Until oil was discovered, lumbering and agriculture were the mainstay of the local economy. With over 200 active oil wells, oil has become the largest industry in the district. Natural gas and coal have also been discovered, but these are not being exploited at the present time.

The town of Valleyview, the largest settlement in the area, is situated at the junction of highways 43 and 34, just north of the 55th parallel. It is serviced by electricity, running water, sanitary sewers, a new 34-bed hospital, schools, and a community centre. There are several tourist camps, hotels, motels, and government campsites.

### Population Trends

The number of farm operators in the survey area rose from 356 in 1931 to 470 in 1966, an increase of 32 percent (Table 3). Over the same

Table 3

#### TRENDS IN FARM POPULATION, I.D. 126

	Year	Number of Operators	Population on Farms	Persons per Farm
I.D. 126	1931 <sup>a</sup>	356	832	2.3
	1941 <sup>a</sup>	456	1,475	3.2
	1951 <sup>a</sup>	484	1,661	3.4
	1956	403	1,864	4.6
	1961	448	1,755	3.9
	1966	470	2,258	4.8
Peace River	1966	8,868	34,182	3.8
Alberta	1966	69,411	281,583	4.1

Source: Dominion Bureau of Statistics, Census of Agriculture, 1931-1966.

<sup>a</sup>Consolidation of data from L.I.D. 706, 707, 708, 736, 737, 738, and 767.





time period total farm population increased from 832 to 2,258; this was an total increase of 170 percent. Alternatively, number of persons per farm rose from 2.3 in 1931 to 4.8 in 1966. At present there are more persons per farm in the survey area than in the Peace River and Alberta. It should also be noted that in 1966 these farms represented approximately five percent of the farms in the Peace River.

## Land Use and Livestock Production

### Land Use

Land in farms increased from 76,000 acres in 1931 to 254,000 acres in 1966, an increase of over 230 percent. The improved acreage rose from 6,739 acres to 115,000 acres, an increase of 160 percent or 3,087 acres per year. Average farm size rose from 213 acres to 541 acres over the same time period (Table 4). Present farm size is nearly the same as for the Peace River as a whole. Improved acreage per farm increased from 19 acres to 244 acres. Since 1931, the percentage of improved acreage has risen from 9 to 45 percent, the latter figure being well below the average for the Peace River.

While total wheat acreage has increased, the proportion of land in wheat declined from 21 percent in 1931 to 14 percent in 1966. For the Peace River, the average farm had 17 percent of improved land in wheat in 1966. Since 1931, the share of improved acreage allocated to oats declined from 43 percent to seven percent. On the other hand, barley has been increasing in importance and is currently occupying 20 percent of improved acreage. Flaxseed reached a peak of eight percent in 1956 but now occupies only six percent of improved acreage. Rapeseed acreage has also increased claiming eight percent of improved acreage in 1966.





Table 4

## TRENDS IN AVERAGE FARM SIZE AND LAND USE PER FARM, I.D. 126

Location	Year	Total Land (acres)	Improved acres	Land percent	Use of Improved Acreage						
					Wheat	Oats	Barley	Flax- seed	Rape- seed	Tame Hay	Summer Fallow
					(percent of improved land)						
I.D. 126	1931 <sup>a</sup>	213	19	9	21	43	8	0	0	3	11
	1941 <sup>a</sup>	245	56	23	27	30	9	0	0	7	19
	1951 <sup>a</sup>	303	115	38	21	28	11	2	0	20	9
	1956	388	145	37	10	19	23	8	0	15	14
	1961	449	186	41	12	16	18	6	3	21	11
	1966	541	244	45	14	7	20	5	8	19	13
Sample	1966	702	306	44	11	7	14	4	4	17	n.a.
C.D. 15	1966	570	343	60	17	4	22	4	9	16	19

Source: Dominion Bureau of Statistics, Census of Agriculture, 1931 - 1966.

<sup>a</sup>Consolidation of data from L.I.D. 706, 707, 708, 736, 737, 738, and 767.



There has been a noticeable increase in the relative importance of barley, flaxseed, rapeseed, and tame hay production.

As can be seen in Table 4, improved pasture land increased considerably over the 35-year period utilizing 19 percent of improved acreage in 1966. Farms in the survey area allocated a larger proportion of improved land to oats, flaxseed and tame hay than the average farm in the Peace River, but less to the more profitable cash crops - wheat, barley, and rapeseed. However, as will be seen below (Table 16a and Table i, Appendix), operators in the area harvest significant amounts of forage seeds from the land classified by the Census as tame hay.

### Livestock Production

Number of cattle per farm rose from 5.4 head in 1931 to 18.8 head in 1966 (Table 5). Pigs and poultry numbers per farm increased until 1961, but have since experienced a decline. On the average, I.D. 126 carries more livestock per farm than the average farm in the Peace River.

### Sample Farms

Farms in the sample were 23 percent larger than farms in the study area as a whole, and 19 percent larger than those in the Peace River. Several explanations may be advanced for this difference. Most likely operators in the sample had a different definition of their farms than that of the Dominion Bureau of Statistics.<sup>1</sup> Operators were asked to include all the lands they controlled whether or not any farm income was obtained therefrom. Moreover, in this study partnership farms were considered management units, regardless of the legal nature of the partnership contract.

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<sup>1</sup>D.B.S., Census of Agriculture, 1966, p. 5.



Table 5

TRENDS IN LIVESTOCK NUMBERS PER FARM, VALLEYVIEW

Location	Year	Cattle	Pigs	Sheep	Poultry
Valleyview	1931 <sup>a</sup>	5.4	1.0	0	21.3
	1941 <sup>a</sup>	5.9	13.4	0.2	43.3
	1951 <sup>a</sup>	6.0	4.9	0.5	15.1
	1956	12.0	9.7	1.0	74.8
	1961	13.4	11.0	3.2	90.6
	1966	18.8	8.1	2.9	56.2
Sample	1966	17.0	24.0	1.0	24.0
Peace River	1966	15.4	6.8	1.3	46.7

Source: Dominion Bureau of Statistics, 1966, Census of Canada, Agriculture, Alberta, 1931 - 1966.

<sup>a</sup>Consolidation of data from L.I.D. 706, 707, 708, 736, 737, 738, and 767.





Farms in the sample and survey area had similar proportions of improved acreage. These proportions were well below the average for the Peace River reflecting a low level of development, and possibly lower suitability of the land for farming, leading to a lower income generating capacity.

The proportion of improved land in the sample that was allocated to wheat, barley and rapeseed was below the average for the survey area and the Peace River (Table 4). On the other hand, the proportion of improved land planted to oats was the same for the sample and the survey area. A similar observation was also true for flaxseed and tame hay. On the whole, land use in the sample appeared to be rather similar to the general acreage as reported in the 1966 census.

In addition, sample farms had approximately the same number of cattle and sheep as the survey area and the Peace River Region as a whole. Substantially more pigs and less poultry were found on sample farms than the average farm in the survey area and the Peace River (Table 5). In general, however, it can be said that in the sample livestock inventories, like land use, were similar to the survey area.



## Chapter IV

### CHARACTERISTICS OF SAMPLE FARMS AND FARM FAMILIES

A representative sample of farms in the survey area was selected for intensive study. Employing an area sampling technique and with the aid of a table of random numbers, square mile sections were randomly selected from the land that was open to disposition. Sample sections were drawn until the number of farmers interviewed reached 100; all farmers residing in the sample sections were interviewed.

Sample farms were stratified into four subsets based on the initial tenure status of the operator. The four classes were Homestead Sale, Civilian Homestead, Veteran Homestead, and Non-Homestead; the classes were comprised of 25, 31, 12 and 32 farms, respectively. The latter group included operators who purchased farms by private arrangements, a few grazing leases, and farms received as gifts and inheritance. The designated group names are used interchangeably with the terms Group I, II, III and IV, respectively.

#### Farm Organization and Production Measures

##### Years of Farming Operation

The average number of years that sample farms have been in operation was 12 years with a minimum of one year and a maximum of 40 years (Table 6). Civilian homesteads were in operation for the longest time period, 18 years. In contrast, Veteran homesteads and Non-homestead farms were



operating for 13 and 11 years respectively. Homestead Sale farms which are also civilian homesteads, have been in operation for only seven years.

Table 6

AVERAGE YEARS OF FARMING OPERATION, INITIAL NET WORTH, INDEBTEDNESS, AND TOTAL ASSETS, BY INITIAL TENURE STATUS, USING CURRENT DOLLARS, I.D. 126, 1967

Initial Tenure Status	Farm Operation	Initial		
		Net Worth	Indebtedness	Total Assets
I Homestead Sale	7yrs.	\$3,752	\$280	\$4,032
II Civilian Homestead	18	1,934	0	1,934
III Veteran Homestead	13	4,264	3,697	7,961
IV Non-Homestead	11	5,923	4,015	9,938
All Farms	12	3,944	1,799	5,743
Standard Deviation	11	6,307	2,539	8,846
Minimum	1	0	0	0
Maximum	40	29,515	16,460	45,975

#### Initial Net Worth and Total Assets

The Homestead Sale and Civilian Homestead groups began farming with net worths of \$3,752 and \$1,934 respectively. These groups began with little or no outstanding debts. On the other hand, Veteran homesteaders began with more net worth and capital than their civilian counterparts, \$4,264, and \$7,961, respectively (Table 6). Moreover, for every dollar owned, Veteran homesteaders borrowed \$0.87.

Those operators who obtained their farms through private contract had substantially more capital of their own. Like the Veteran homesteaders, they borrowed almost as much as they owned in order to obtain control of their respective farms - \$0.69 per dollar owned.

Farms were not homogeneous with respect to initial capital. Since





homesteading requires a relatively small initial capital outlay, it attracts people with little capital of their own. In addition, credit practices and lack of collateral denies non-veteran homesteaders (Groups I and II) access to the credit market. The magnitude of loan capital on non-veteran homesteads does suggest a reluctance to take risk. Alternatively, Veteran homesteaders and Non-homesteaders were more favourably endowed with capital of their own; they appear to demonstrate a greater awareness of the importance of capital to the successful establishment of their farms, and were willing to incur the risk and uncertainty involved in borrowing.<sup>1</sup>

#### Initial Improved Acreage

Contrary to popular belief, homesteaders do not usually begin with wholly unimproved farmsteads. In the sample, 24 percent of the Homestead Sale farms and 19 percent of the Civilian homesteads had some improved land when they began farming. In contrast, 50 percent of the Veteran homesteaders, and 84 percent of the Non-homesteaders obtained their farms with some land improvements (Table 7). This observation was in keeping with the records in the Department of Lands and Forest which revealed that homesteaded lands in the sample averaged two homestead entry cancellations per patent (title) issued.<sup>2</sup>

Since Non-homesteaders had adequate capital to commence farming, they were able to acquire relatively well developed farms - 129 acres of improved land (Table 8). In contrast, the other tenure groups had little initial land improvements.

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<sup>1</sup>See Chapter V for current net worth and capital.

<sup>2</sup>A separate file is kept for every quarter section on which entry is granted; over 75 percent of these files were examined.



Table 7

FARMERS' OPINION ON INITIAL LAND IMPROVEMENT,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Operators who started with some improved acreage <sup>a</sup>	Considered important to success <sup>b</sup>
I Homestead Sale	24%	67%
II Civilian Homestead	19	50
III Veteran Homestead	50	67
IV Non-Homestead	84	89
All Farms	45	78

Responses to Question #4 -<sup>a</sup>When you took over was some of the land cleared and/or broken?

-<sup>b</sup>Do you think that the initial clearing and/or breaking have contributed significantly to the success of your farm? (Question directed to operators with initial improved acreage.)

Table 8

AVERAGE FARM SIZE, IMPROVED ACREAGE, PERCENTAGE  
IMPROVED ACREAGE, AND RATE OF IMPROVEMENT,  
BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Present Total Acreage	Improved Acreage		Rate of Improve- ment <sup>b</sup>
		Initial	Present acreage percent <sup>a</sup>	
	(acres)	(acres)	(acres)	(%) (acres/year)
I Homestead Sale	536	12	168	32 22
II Civilian Homestead	671	9	366	55 20
III Veteran Homestead	725	27	416	57 30
IV Non-Homestead	851	129	316	37 17
All Farms	702	50	306	44 20
Standard Deviation	689	110	254	
Minimum	16	0	0	
Maximum	6,000	575	1,400	

<sup>a</sup>Present improved acreage as percentage of present total acreage.

<sup>b</sup>Present improved acreage less initial improved acreage divided by years of farming operation.





Eighty-nine percent of the operators in Group IV who reported some initial land improvement suggested the initial improvement contributed significantly to the success of their farms (Table 7). Thus it is seen that not only did farms in the Non-Homestead and Veteran Homestead groups have more net worth and capital to commence farming, but they also had more improved land to begin farming. In addition, 78 percent of the operators who had some initial improvement, felt that such improvement contributed significantly to the performance of their farm.

#### Land Use and Livestock Production

Veteran homestead and Non-homestead farms reported the largest acreage, 725 and 851 acres, respectively (Table 8). Civilian homesteaders reported smaller farm sizes, Group I having the lowest acreage - 536 acres.

Although the Non-Homestead group had more capital and improved acreage at the commencement of farming, improved acreage in 1966 was only 316 acres or 37 percent of total acreage.<sup>1</sup> On the other hand, Veteran homesteads with their relatively high initial capital were able to improve land at an average of 30 acres per year; this was an average of 31 percent more land per year than any other group. As a result, Veteran homesteads presently average by far the greatest improved acreage, 416 acres or 57 percent of total acreage.

Fifty-five percent of total acreage (366 acres) was improved on Civilian homesteads. Both operators in the Homestead Sale and Civilian Homestead groups developed land more rapidly than Non-homesteaders (Table 8).

In general, all groups seemed to have adopted similar cropping

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<sup>1</sup>Total acreage in this group includes grazing rentals.





patterns (Table i, Appendix). This was most noticeable in the cases of wheat and oats. Barley was the most predominant grain grown in the various tenure groups, except in Group II. The proportion of improved land allocated to rapeseed in Group IV was twice the proportion used in either Groups I or II. Very little flax was planted on Veteran homesteads in 1966.

Civilian homesteads concentrated heavily on forage seed production devoting 18 percent of improved land to this crop. In contrast, Veteran homesteads and Non-homestead farms allocated 11 percent and six percent of improved land, respectively, to forage seed. Homestead Sale farms did not have any land under forage seed.

Hay was the most important crop on Veteran homesteads; 19 percent of improved land was in hay. On the other hand, seven percent, three percent and one percent of improved land were put to hay in Groups IV, II and I, respectively.

Improved land used for other purposes varied from 38 and 39 percent in Groups III and IV to 42 and 60 percent in Groups II and I. This large "other" component was comprised mainly of fallow and permanent pasture. (Information on acreage in fallow and improved pasture was not collected from the operators.)

All tenure groups had some livestock, but Non-homestead farms appeared more heavily committed to livestock production than homestead farms. They reared more cattle, pigs, sheep, and poultry per farm than any other farm. Non-veteran homesteads carried approximately the same number of cattle, pigs, horses and poultry per farm as the sample average (Table 9). The small number of livestock on Veteran homesteads does not necessarily mean that livestock production was unimportant on these farms. Operators were asked to give the number of livestock on farms in December



1966. Veteran homesteads might have marketed their stock before December. (Veteran and Civilian homesteads reported similar levels of livestock sale.)

Table 9

AVERAGE NUMBER OF LIVESTOCK, BY INITIAL TENURE STATUS,  
I.D. 126, 1966

Initial Tenure Status	Cattle	Pigs	Horses	Sheep	Poultry
	(number per farm)				
I Homestead Sale	4	1	0	0	3
II Civilian Homestead	15	23	1	0	19
III Veteran Homestead	8	6	1	0	20
IV Non-Homestead	32	49	1	3	52
All Farms	17	24	1	1	24
Standard Deviation	35	68	2	10	58
Minimum	0	0	0	0	0
Maximum	225	400	12	95	400

Average Long Term Yields - Grain

The average long term yields given by respondents for wheat, oats and barley were 22, 44 and 32 bushels per acre, respectively. Wheat ranged from 8 to 40 bushels, oats 20 to 80 bushels and barley 8 to 75 bushels (Table ii, Appendix). Homestead Sale farms and Veteran homesteads reported similar yields for wheat and oats. Civilian homesteads and Non-homestead farms tended to report lower yields. The yield levels indicate the productivity of the farms and therefore reflect on both initial productivity and managerial ability in the various tenure groups.

Marketing

Eighty-two percent of the operators in the sample reported some grain sales, 29 percent sold some cattle and 17 percent traded in hogs (Table 10). The main trading points for grain were Grande Prairie and





High Prairie, located an average of 46 miles from the sample farms.

With the exception of the Non-Homestead group, a similar proportion of operators in each group sold grain to elevators at the above-mentioned trading points. In contrast to grain marketing, the main trading points for cattle and hogs were Edmonton and Grande Prairie; of the operators reporting cattle and hog sales, over 70 percent sold their stock in Edmonton.

The marketing system in the study area appears to be deficient in several respects. When operators were asked to list the greatest problems confronting farmers in the area, 9 percent mentioned poor marketing facilities on the first response. (See Table xv, Appendix.) There are no grain elevators in I.D. 126; grain is shipped to the nearest elevator 46 miles away at a shipping cost of approximately nine cents per bushel. Because there is only one cattle buying station in the district, there is little competition between buyers. Most of the cattle was sold in Edmonton (Table 10). One operator pointed out that he received better prices for his livestock in Edmonton than in Grande Prairie or Valleyview, even after allowing for shipping costs.

Although operators received better prices in Edmonton, they were still at a comparative disadvantage. The survey area is a marginal farming area. There were transportation costs and losses through shrinkage, resulting in part from the long hauls to markets. Operators lacked market information on livestock prices. Moreover, once livestock had been shipped, it was pointless to bring stock back to the farm; therefore, livestock had to be sold at going prices, low though they might be.





Table 10

MAIN TRADING POINTS AND MARKET DISTANCE,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

	Unit	Initial Tenure Status <sup>a</sup>				All Farms Reporting
		I	II	III	IV	
<hr/>						
A. Grain Sales						
Farms Reporting	%	64	94	75	88	82
Trading to Grande Prairie	%	44	45	44	79	56
High Prairie	%	50	41	44	14	34
Others	%	6	14	11	7	10
Average Distance to Market miles		43	46	48	47	46
<hr/>						
B. Cattle Sales						
Farms Reporting	%	12	39	17	38	29
Trading to Grande Prairie	%	33	17	-	25	21
Edmonton	%	66	83	50	67	72
Others	%	-	-	50	8	7
Average Distance to Market miles		155	203	160	164	169
<hr/>						
C. Hog Sales						
Farms Reporting	%	4	13	8	34	17
Trading to Grande Prairie	%	100	-	-	36	29
Edmonton	%	-	100	100	64	71
Average Distance to Market miles		60	243	200	188	178

<sup>a</sup> I Homestead Sale  
II Civilian Homestead  
III Veteran Homestead  
IV Non-Homestead



## Farm Operator and Family Characteristics

### Age and Farm Experience

The average age of operators in the sample was 44 years with ages ranging from 22 to 83 years. The oldest operators were found in the Veteran and Civilian Homestead groups, while the Homestead Sale and Non-Homestead groups had younger operators (Table iii, Appendix).

Over 84 percent of the operators in each group had some farm background; more than a half of these operators grew up on diversified farms. (See Table iv, Appendix.) Farmers in the Veteran Homestead and Non-Homestead groups tend to come from larger farms, more than 400 acres. In contrast, the operators from the Homestead Sale and Civilian Homestead groups tend to come from smaller farms (Table iii, Appendix). Furthermore, 47 percent of the parental farms were located in the study area or in areas similar to I.D. 126.

From Table iii it is also seen that operators had several years of farming experience. The average years of farming experience for the sample was 22 years with a range of 1 to 53 years. Thus it is little wonder that operators overwhelmingly disregarded lack of farming experience as a serious problem in the study area.

### Nonfarm Experience and Off-Farm Employment

Sixty percent of the farmers in the Homestead Sale group had been professionals or had practised a trade; 58 percent of the Civilian homesteaders had been tradesmen; 67 percent of the Veteran homesteaders, and 50 percent of the Non-homesteaders had been professionals or tradesmen (Table v, Appendix). Groups I and III had the largest proportion of professionals - 16 and 17 percent. In contrast, only six percent of the



operators in Group IV had some professional training; Group II had none.

While 70 percent of the sample population worked occasionally or frequently in off-farm employment, 30 percent seldom, if ever, worked off the farm (Table vi, Appendix). The majority of the operators in each tenure group worked occasionally or frequently off the farm. However it should be noted that while 16 percent of the operators in Group I and 25 percent of those in Group III seldom if ever worked off the farm, more than one-third of the operators in Groups II and IV seldom if ever worked in nonfarm employment. This observation suggests that the larger the proportion of skilled and professional operators in each group, the greater was the preoccupation with off-farm employment.

#### Marital Status, Size of Family, and Number of Children

Eighty-five percent of the operators in the sample were married, 84 percent of the operators in Groups I, II and IV and 94 percent in Group III (Table 11). The average size of family was 4.9. Non-homestead farms and Veteran homesteads had the largest families, followed by Civilian homesteads and Homestead Sale farms. Similarly the Non-homestead farms and Veteran homesteads recorded the largest number of children - 4.1 and 3.7, followed by the Civilian homesteads and Homestead Sale farms - 2.8 and 2.3.

The average number of individuals living on farms in the sample was 3.8. Non-homestead farms and Veteran homesteads again reported the largest number - 4.9 and 4.6 respectively. The Homestead Sale farms and Civilian homesteads had 3.4 and 2.7, respectively. The largest number of children residing on farms were also found in Groups IV and III.

Since the farm family is an obvious source of farm labour, the number of boys ten years and above was also documented. Veteran





homesteads and Non-homestead farms recorded the largest number of boys ten years and above - 1.2 and 1.1 respectively. Groups I and II averaged 0.4 boys.

#### Average Years of Schooling

Veteran homesteaders averaged the highest level of formal education - 9.5 years, whereas Civilian homesteaders and Non-homesteaders reported the lowest level of education - 8.3 years. Farmers in the Homestead Sale group were intermediate with 9.0 years (Table 12). The relatively high levels of education in Groups III and I were in keeping with the large proportion of nonfarm training recorded in these two groups.

On the average, wives reported more years of formal education than their husbands (Table 12). Since most of the homemakers had some farm background, the more obvious conclusion is that farm girls, relatively unfettered by farm chores, tend to go to school for a longer period of time. Veteran homesteaders and Homestead Sale farmers had the most educated wives - 10.3 and 9.8 years, respectively. Wives from the Non-Homestead and Civilian Homestead groups had 9.1 and 8.5 years of schooling, respectively.

Farm children - among those reporting completion of their formal education - achieved a higher level of education than their parents. The average grade completed by these children was 10.5. Children on Veteran homesteads received more schooling than children of any other tenure group - 11.0 years. Children of all tenure groups average over 10 years of schooling. Thus on the average farm children in the area obtained a level of formal education comparable to Canadian standards.

Although operators on Veteran homesteads were, on the average,



Table 11

MARITAL STATUS, SIZE OF FAMILY AND NUMBER OF CHILDREN,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Married	Size of Family	Number of Children	Number Family	Residing Children	on Farm Boys <sup>a</sup>
I Homestead Sale	84%	4.0	2.3	3.4	1.7	0.4
II Civilian Homestead	84	4.5	2.8	2.7	1.0	0.4
III Veteran Homestead	92	5.5	3.7	4.6	3.1	1.2
IV Non-Homestead	84	5.8	4.1	4.9	3.3	1.1
All Farms	85	4.9	3.2	3.8	2.1	0.7

<sup>a</sup>Boys 10 years and above.

Table 12

YEARS OF SCHOOLING AND SOCIAL PARTICIPATION,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Years of Schooling			Social Participation <sup>b</sup>
	Operator	Wife	Children <sup>a</sup>	
I Homestead Sale	9.0	9.8	10.5	0.6
II Civilian Homestead	8.3	8.5	10.3	0.3
III Veteran Homestead	9.5	10.3	11.0	1.2
IV Non-Homestead	8.3	9.1	10.7	0.7
All Farms	8.6	9.3	10.5	0.6

<sup>a</sup>Years of schooling of children who completed school.

<sup>b</sup>Average number of offices held by operator in any organisations within the last 10 years.



older than operators in the other tenure groups, they had the youngest children - 11 years of age, as compared to 13, 20, and 14 years for Groups I, II and IV, respectively. This discrepancy may be due to the fact that the war effort disrupted and postponed marriage of many soldiers.

### Social Participation

To determine the extent to which operators participated in community affairs a social participation index was established. Operators were asked to list the various organizations in which they held office in the past 10 years. Civilian homesteaders apparently were least involved with an average of 0.3; Veteran homesteaders had the highest level of participation - 1.2 (Table 12). The sample average was 0.6.

### Level of Living

The level of living index compiled in this study was patterned after the Level of Living Index used by Helen Abell.<sup>1</sup> Several questions were asked about living accommodation on farms in the hope of assessing the material well-being of the farm population. A score was given to each reply (Table vii, Appendix), and the sum of the scores became the index of level of living. The maximum score attainable was 27.

Of the 100 operators interviewed, nine had no house on their holdings. The largest proportion of farms without living accommodation were found in the Homestead Sale group (Table 13). This finding could be explained by the fact that the operators in this group were just getting into farming.

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<sup>1</sup>Helen Abell, Alberta Farm Operators and The Level of Living Concept 1952, Canada Department of Agriculture, Report No. 2, Queen's Printer, 1952.





The level of living score for the sample ranged from 5 to 25 with a sample average of 17. Non-homestead farms recorded the highest score 18 as against 17 for the Homestead Sale group and 16 for Civilian and Veteran homesteads. However since group differences were not very significant one could conclude that no tenure group enjoyed a markedly higher level of living than the others. (Group averages were calculated on the basis of farms with houses.)

Buckmire and Campbell had initiated joint studies in Bonnyville M.D. and the west half of Red Deer.<sup>1</sup> Their level of living index was similar to the index used in this study. It would appear that the level of living of operators in I.D. 126 was intermediate between the levels of living of farmers in Bonnyville and Red Deer.

Table 13

AVERAGE LEVEL-OF-LIVING SCORE,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Farms		Level of Living Score
	Without houses	With houses	
I Homestead Sale	28%	72%	17
II Civilian Homestead	3	97	17
III Veteran Homestead	0	100	16
IV Non-Homestead	3	97	18
All Farms	9	91	17

Family Labour

Most of the labour on the survey farms was supplied by the farm

<sup>1</sup>Unpublished M.Sc. theses by George Buckmire and Neil Campbell, University of Alberta.



family. Seventy-two percent of the farms in each tenure group made occasional or frequent use of family labour (Table viii, Appendix). Veteran homesteaders made the most intensive use of such labour - 83 percent of these operators reported occasional or frequent use of family labour, followed by operators in Groups IV, II and I respectively.

Thirty-eight percent of the sample farms hired extra labour. Not only did Veteran homesteaders make intensive use of family labour, but 67 percent of these farmers hired extra labour. In contrast, 28 percent, 32 percent and 41 percent of Groups I, II and IV respectively hired extra labour. Sixty-one percent of the farms that hired extra labour encountered some difficulty in obtaining such labour. On the other hand, of the 62 percent of the farmers that did not hire extra labour, 97 percent felt that extra labour was readily available (Table viiia, Appendix).

One would expect that the good personnel managers should find it relatively easy to hire extra labour. However, the answer of those who actually hired labour has to be weighted differently from the answers of those who had not tried to hire extra labour. Of the farms that hired extra labour, the largest proportion of operators that encountered difficulty in securing extra labour was found in Group III.

The intensity of use of hired labour on farms depend on the need for such labour. Size of operation is one factor determining the need for hiring labour. It was also found that this need appears greater on Veteran homesteads where the average age of the children was only 11





years. Although more intensive use was made of the farm children in this group, outside labour was still required. It should also be recalled that the majority of the farmers who hired extra labour found it difficult to obtain such labour. Therefore the conclusion is that farmers are more frustrated in hiring labour if they have been through the process of getting such labour.

### Attitudes of Farm Operators

#### Operator's Self-Rating

Operators were very conservative in assessing themselves as farm managers. No respondent considered himself an excellent farm manager. Only seven percent of the sample regarded themselves as very good managers. Ninety percent of the operators in each group rated themselves as fair to average with the emphasis on average. Two-thirds of the respondents in Group IV regarded themselves as fair managers (Table ix, Appendix).

#### Farming Goals, Objectives and Preferences

Three questions were designed to establish farming goals. Only a third of the operators in the sample was sufficiently motivated to answer "yes" to the direct question "Is making money one of your most important objectives?" (Table x, Appendix). The majority of these respondents were found among the Homestead Sale and Civilian Homestead groups. A mere 17 percent of the Veteran homesteaders viewed making money as an important farming goal.

The most important farming goal of operators was to make a decent living through farming; fully one-third of the operators mentioned this goal. Twenty percent of the respondents hoped to clear more land and





improve their farmstead, 15 percent wanted to develop mixed farming and 12 percent desired to establish a commercial farm. Other farming goals included the desire to sell the farm and retire on the proceeds of the sale, and the striving to obtain title to the farm; in a few instances farming goals were quite indefinite due to old age or ill health (Table xi, Appendix). In general, the majority of the operators wanted to establish farms that would afford them a reasonable standard of living.

Operators were also asked to select from a list of seven characteristics of farm life one which they enjoyed most. All groups emphasized being their own boss, and living in the country (Table xii, Appendix).

#### General Attitudes to Credit

Most operators felt that they could borrow additional funds if they so desired. Over 85 percent of those who felt they could borrow indicated a willingness to go into debt if the venture appeared profitable (Table xiii, Appendix). Willingness to borrow was found to be notably less among the Veteran homesteaders. Sixty percent of the operators who could not obtain credit were also willing to borrow if the venture was feasible.

A partial explanation for the disinclination to go into further debt undoubtedly stemmed from the fact that Veteran homesteaders were well advanced in age - 51 years. It should also be recalled that 83 percent of the Veteran homesteaders rejected making money as an important farming goal. These operators were probably satisfied with their present farm performance.

Sources of Credit: Three-quarters of the sample looked on chartered banks as the most dependable source of credit. Loans under the Farm Improvement



Loan Act were second with eight percent followed by the Farm Credit Corporation with six percent (Table xiiia, Appendix). Other sources of credit included the Veteran Loan Act.

### Opinions of Farm Operators

#### Farming Problems

The study tried to ascertain from the farmers themselves what they considered their main farming problems. Each operator was requested to select from a list of six alternatives two of the greatest difficulties confronting his farm (Question #44). Responses are presented in Tables xiv and xiva, Appendix.

An overwhelming proportion of the respondents cited lack of capital as the greatest handicap on their farms - 73 percent. This response contrasted with the previous opinions of operators that credit was readily available to them.

Thirty-eight percent of the respondents gave "poor weather" as the second greatest difficulty on their farms, while 24 percent opted for insufficient land. If the two top-ranking difficulties are combined, lack of capital and poor weather were perceived by operators as the most severe problems on sample farms, followed by "insufficient land" and "poor soils" (Table xivb).

Operators were also asked (by means of open-end question #45) what they perceived as the biggest obstacles to present day farming in the study area. Question #45 served as a control on question #44. Responses were categorised into ten classes. The major grievances suggested by the preceding limited choice question - lack of capital, poor weather, insufficient land - were mentioned again and in the same order. The frequency of these responses may be biased upward in comparison to





other problems cited.

Additional problems mentioned were of two kinds. There were problems common to all farmers in Alberta and given wide coverage by the news media and farm organizations. These problems included the high cost of machinery (18%) and the cost-price squeeze (16%). The other category of problems was specific to local needs of the survey area, namely poor marketing facilities (9%), lack of adequate infra-structure (4%), and the high cost of land clearing (3%).

A significant proportion of operators on the Homestead Sale farms still saw lack of capital as the main problem in the area. There was less consensus among Civilian homesteaders on their perception of farming problems; a similar proportion mentioned lack of capital, machinery costs, and poor marketing facilities. One-third of the Veteran homesteaders still viewed lack of capital as the main villain, while 25 percent looked to poor weather or the cost-price squeeze. Twenty-eight percent of the Non-homesteaders listed the cost-price squeeze, and 22 percent recorded poor weather.

The Homestead Sale group, being the most recent settlers to the study area, demonstrated greater concern than the other groups for lack of all-weather roads, drainage, running water and electricity. It is customary to grant homestead entry before an adequate infra-structure is established. Thereafter, a period of agitation follows before gravel roads are put in. A case in point was given by a recent article in the Edmonton Journal; "Four miles of dirt road meant an end to education."<sup>1</sup> In that article, the writer pointed out that through lack of an all-weather road the child of a homesteader had to quit school in Grade 9.

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<sup>1</sup>Edmonton Journal, Oct. 2, 1968, p. 56.





Some operators gave more than one response to Question #45. The total responses are recorded in Table xva, Appendix.

To test whether operators were aware of developing problems in the area, they were requested to suggest what problems would confront farmers in the future. By and large most respondents saw present day problems continuing into the future.

**Tax Arrears:** Tax arrears on farms are an indication of economic difficulties, low morale, and poor farm performance. One-third of the sample farms were behind in their tax payments. Civilian homesteads had the lowest proportion of tax arrears, 23 percent. A similar proportion of farms in the other groups were overdue in tax payments, 42 percent to 44 percent (Table xvi, Appendix). Since no time period was specified in the question put to operators, caution should be taken in interpreting the responses. The average annual tax levied per sample farm in 1966 was only \$176, and the average farm operator should have been able to foot his tax bill. (Note: no operator pointed to high taxes as a major farming problem.)

#### The Value of Farm Experience and Farming Knowledge

While few operators in the sample considered lack of farming experience a farming problem, (see above), when operators were asked whether they thought that prospective homesteaders had adequate experience and knowledge of farming conditions in the area, these two factors were found wanting by 53 percent and 62 percent of the respondents respectively (Table xvii, Appendix). There was greater consensus among the older operators who had been farming in the area for a longer period of time - Veteran and Civilian homesteaders - that experience was deficient.



A substantial majority in all groups felt that knowledge of farming conditions was generally lacking.

#### Satisfying the Homestead Policy Requirements

Operators were asked whether homesteaders found it relatively easy to satisfy the requirements of the homesteading policy. This question was aimed at determining whether the homesteading policy per se was working undue hardships on homesteaders. Responses were contradictory. Respondents were evenly divided in their assessment of the residence requirements (Table xviii, Appendix). The cultivation duties were considered "easy" somewhat more often than not, while nearly half the respondents viewed the payment duties as easy, compared to 35 percent who viewed them as onerous (11 percent were undecided).

#### Definition of Economic Unit

Operators were asked what size of farm, in their opinion, would suffice for successful farming in the study area. Size was defined in terms of acreage, capital and gross farm income. The answers were considered as indications of the operators' level of aspiration and their awareness of the amount of resources required for successful full-time farming.

The average acreage desired by operators was 595 acres (Table xix, Appendix). Group means deviated little from the overall average. This desired acreage was well below the average acreage for sample farms - 702 acres (Table 8). With the exception of the Homestead Sale, all groups had more land than was considered necessary for success.

Capital considered necessary for success averaged \$48,500, as compared to the average capital value for sample farms \$44,000 (Table 14). Only Veteran homesteaders believed less capital to be necessary for





success than they actually controlled.

All groups failed to achieve the level of gross farm income which they themselves considered necessary - averaging \$14,500 per farm. The average gross farm income actually achieved by the sample population was \$5,700 (Table 15). Desired gross farm income in Group I was approximately six times actual income, and two to three times actual farm income in the other groups.

#### Operators' Recommendations for Policy Changes

Operators in the sample were given the opportunity to recommend policy changes to improve farming in the study area. These recommendations are contained in Table xx, Appendix.

A wide variety of recommendations were offered. Seventeen percent of the sample suggested that an adequate infra-structure<sup>1</sup> be established before or immediately after entry is given to the land. Fifteen percent of the operators wanted better credit arrangements to allow for increased farm credit at reasonable interest rates.

Eleven percent of the sample saw the reduction in the price of raw land as being conducive to improving farming in the area. These operators were drawn principally from the ranks of homesteaders. It should be pointed out that the purchase price of land to homesteaders is unilaterally determined by the government; no bargaining is involved in arriving at this price.

There was much talk in the area of land speculators inflating land prices. Nine percent of the sample saw the problem as being sufficiently important to recommend that more stringent qualifications be introduced to minimise speculation, thereby preserving farm land for bona fide

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<sup>1</sup>Specific recommendations included all-weather roads, drainage, electricity, and running water.





farmers.

Seven percent of the sample would like to see certain improvements made before releasing the land for settlement - land clearing and breaking, and subsidized well drilling. A similar proportion of operators felt that homestead duties and other contractual arrangements should be relaxed when there was crop failure. Yet, in perusing the official records of the homesteaded lands in the sample, it became apparent to the researcher that homestead duties were always postponed in the event of ill health or crop failure. Moreover there appeared to be some hesitancy to cancel homestead contracts presumably in the hope that the homesteader would comply with the demands of the contract.

Three percent of the sample recommended that the size of the homestead be increased. These respondents were drawn from the Homestead Sale and Civilian Homestead groups. Judging from the size of land holdings in the various tenure groups, one is tempted to disregard insufficient land as a general problem. In fact only a relatively small proportion of the operators in the sample looked on insufficient land as a grave problem (see Table xiv, xv, Appendix). However it must be remembered that homestead entry is granted, ceteris paribus, if at least 50 percent of the land is considered arable. Thus, conceivably, on a section of land just over a half may be arable. It may therefore be necessary to set the size of holding in relation to arable acreage. It is also conceivable that the effective size of some homesteads granted may still be less than necessary to establish an economic unit.

Only one percent of the sample requested more technical advice. Other recommendations included comments like better farm prices, informing prospective homesteaders on farming conditions, guaranteed income, lower



the minimum eligible age for homesteading, and preserving some land for the children of farmers in the area.

Finally, operators were asked if, given the authority, they would abolish homesteading. Three-quarters of the sample wanted homesteading to continue. This opinion was held in all four tenure groups.

Having discussed the characteristics of sample farms and farm families, it is necessary to look at the financial performance of sample farms. This is the object of the succeeding chapter.



## Chapter V

### FINANCIAL PERFORMANCE OF SAMPLE FARMS

#### Total Farm Assets, Indebtedness and Net Worth

Total farm assets include the present market values of land, buildings, machinery and equipment as estimated by the farm operators. Average total assets for the sample population were \$43,766 (Table 14). The Homestead Sale group averaged substantially lower values. Non-homestead farms reported the largest values; Civilian and Veteran homesteads accumulated approximately the same level of farm assets.

Total indebtedness or loan capital for the sample population averaged \$5,958. The Non-Homestead group displayed a greater propensity to borrow as shown by the debt-to-equity ratio.<sup>1</sup> For every \$100 owned, Group IV borrowed \$22, as against \$10, \$12 and \$13 for Groups I, II, and III. In view of the fact that many farms in the sample must be considered young and capital-hungry, the debt-to-equity ratios appear low. Sample farms do indeed use proportionately less outside capital than the average farm in the Province and Canadian farms in general.<sup>2</sup>

The average net worth for the sample was \$37,828. Although Civilian homesteaders had been farming in the area for a longer period of time

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<sup>1</sup>Aaron G. Nelson and William G. Murray, Agricultural Finance, (Ames: Iowa State University Press, 1967) p. 249.

<sup>2</sup>M.L. Lerohl, Assets, Liabilities and Net Worth of Canadian Farm Operators, 1935-64, Pub. #10, (Ottawa: Agri. Eco. Res. Co. Canada, 1967).





than Veteran homesteaders and Non-homesteaders, they had a lower net worth. Actually, Civilian homesteaders reported the lowest annual increase in total farm assets and net worth for all tenure groups.

Operators in the Non-Homestead group reported the highest value of farm real estate, followed by Veteran homesteaders, Civilian homesteaders and farmers in the Homestead Sale group (Table xxi, Appendix). All groups except the Homestead Sale, recorded similar values of farm machinery and equipment. Since farms in the Non-Homestead and Civilian Homestead groups had the largest number of livestock, it was not surprising that these groups should record the highest value of other farm assets which included livestock.

Table 14

AVERAGE MAJOR FARM ASSETS, INDEBTEDNESS, AND NET WORTH,  
BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Total Assets	Indebt- edness	Net Worth	Annual Increase	
				Capital	Net Worth
I Homestead Sale	\$27,325	\$2,443	\$24,882	\$3,328	\$3,019
II Civilian Homestead	46,702	5,184	41,518	2,487	2,199
III Veteran Homestead	47,843	5,667	42,260	3,068	2,923
IV Non-Homestead	52,237	9,563	42,705	3,845	3,343
All Farms	43,766	5,958	37,828	3,361	2,974
Standard Deviation	39,242	10,535	34,725		
Minimum	2,150	0	700		
Maximum	200,000	74,900	200,000		

On the average, real estate accounted for over two-thirds of the estimated market value of major assets. Veteran homesteaders showed the largest proportion in the form of real estate, 76 percent (Table xxia, Appendix). Machinery and equipment were valued at 22 percent of major assets. The Homestead Sale group had the largest proportion of capital



in the form of machinery and equipment, 27 percent as against the sample average of 22 percent.

Estimates of the composition of farm real estate value was obtained from 55 operators. The average market values for land and buildings were \$21,694 and \$6,551 respectively (Table xxib, Appendix). Veteran homesteaders reported the largest value for land, \$29,286; this large value is undoubtedly due to the high level of improved acreage on Veteran homesteads. Lands were valued at over 70 percent of farm real estate.

It can be concluded that the capital estimates obtained in this survey compare closely with 1966 Census estimates for the Peace River region.<sup>1</sup> On a per acre basis the survey estimates fall slightly below the regional average (\$62 versus \$69 per acre "major" assets<sup>2</sup>), a result which is to be expected considering the stage of settlement in Valleyview. Survey farmers estimated the value of their real estate to be 69 percent of total assets, the same as the Census estimate. While the share of livestock capital in the survey area appears low - nine percent - compared to ratios found in established regions in the Province, it is in fact higher than the Census estimate of six percent for the Peace River.

The Non-homestead farms, by the very nature of their large land holdings, relatively new buildings, and livestock numbers, accumulated the greatest farm assets. In spite of the fact that Civilian homesteaders were farming in the area longer than any other tenure group, they accumulated less capital and net worth than Non-homesteaders and Veteran homesteaders. The Homestead Sale group being the most recent settlers recorded the lowest values for all categories of farm assets.

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<sup>1</sup>D.B.S., op. cit., Table 22.

<sup>2</sup>Land and improvements, livestock, equipment. See Lerohl, op. cit.





### Nonfarm Income Invested in Farm

To obtain some idea of the nonfarm income flow into farm development, operators were asked for the level of nonfarm income invested in their farms. The average level invested for all farms over an average of 12 years was \$5,496. Veteran homesteaders invested in excess of any other group - \$10,533 or \$810 per annum (Table xxii, Appendix). Civilian homesteaders and Non-homesteaders invested similar total amounts of nonfarm income in their holdings.

### Lifetime Investment in Farm Machinery

Over the life of the farm, Civilian homesteaders and Non-homesteaders invested similar amounts of capital in machinery and equipment - \$15,344 and \$14,587 respectively. Homestead Sale operators had invested \$8,183 and Veteran homesteaders \$11,633 (Table xxiii, Appendix).

Meaningful comparisons of machinery investment can only be made if allowances are made for the years the farm had been in operation, changes in price levels, advances in science and technology, and so on. By expressing investment on an annual basis some allowance was made for the time period. Civilian homesteaders, who reported the highest investment in farm machinery, had the lowest per annum capital investment. Indeed, annual investment in farm machinery was similar for Civilian and Veteran homesteads - \$852 and \$895 respectively as compared to \$1,169 and \$1,326 for operators on Homestead Sale and Non-homestead farms.

## Income and Expenses

### Gross Farm Income

Gross farm income as defined in this study includes the sale from crops and livestock, other farm receipts - final Canadian Wheat Board





payments, Prairie Farm Assistance, Agriculture Relief Assistance, and crop insurance - and income in kind or perquisites. The average gross farm income for the sample was \$5,727. In the case of Homestead Sale farms, average gross farm was well below average (Table 15).

The frequency distribution of tenure groups by gross farm income is given in Table 16. These categories are defined as economic classes by the Dominion Bureau of Statistics 1966 Census. Farms with less than \$2,500 gross farm sales are considered small scale; commercial farms are defined as having sales of \$2,500 or more.

In their Eastern Canada Farm Survey, Menzies et al.<sup>1</sup> used the following definitions:

Less than \$2,500	non-viable
\$2,500 - \$4,999	viable
\$5,000 and above	economic
\$3,750	poverty line

The Agriculture and Rural Development Act (ARDA) defines the poverty line as \$3,750.

In general, farms in the survey area appeared to be performing slightly better than the average farm in the Peace River. While 37 percent of the farms surveyed were classified as non-viable or small scale, as much as 46 percent of those in the Peace River were small scale operations. Forty-two percent of the sample farms grossed over \$5,000 as against 32 percent for Peace River. Both areas had similar proportions of farms grossing between \$2,500 and \$5,000 - 21 percent. All in all, an even 50 percent of the sample were above the "poverty line" of \$3,750 as compared to only 41 percent for the region. On the

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<sup>1</sup>M.W. Menzies et al., Poverty in Canada: Its Nature, Significance, and Implications for Public Policy, (Winnipeg: Manitoba Pool Elevators, 1965), p. 5.



Table 15

## AVERAGE INCOME AND FARM EXPENSES, BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Number of Farms Reporting	Cash Income <sup>a</sup>		Income <sup>b</sup> in Kind	Gross Farm Income	Total Farm Expenses	Net <sup>c</sup> Farm Income	Off-Farm Income	Family <sup>d</sup> Income
		Crop Sales	L/stk Sales						
I Homestead Sale	25	\$1,344	\$192	\$449	\$2,135	\$3,203	-\$1,068	\$4,447	\$3,380
II Civilian Homestead	31	4,891	2,215	397	7,727	5,384	2,343	2,705	5,047
III Veteran Homestead	12	4,445	2,068	444	7,168	4,633	2,535	2,744	5,279
IV Non-Homestead	32	1,970	3,078	501	6,056	6,027	29	3,111	3,140
All Farms	100	3,016	1,968	449	5,727	4,954	762	3,275	4,048
Standard Deviation		4,678	4,171	894	6,504	4,668	4,032	4,177	4,963
Minimum		0	0	0	0	36	-7,994	0	-5,286
Maximum		33,900	20,440	6,050	36,500	26,043	23,523	27,504	23,523

<sup>a</sup>Total cash income is the summation of crop sales, livestock sales and other farm cash receipts.

<sup>b</sup>Income in kind (perquisites) is the difference between gross farm and total cash incomes.

<sup>c</sup>Net farm income is gross farm income less total farm expenses.

<sup>d</sup>Family income is net farm income plus off-farm income.



Table 16

## INITIAL TENURE GROUPS CLASSIFIED BY GROSS FARM INCOME, I.D 126, 1966

Initial Tenure Status	less than \$1,200	\$1,200- \$2,499	\$2,500- \$3,749	\$3,750- \$4,999	\$5,000- \$7,499	\$7,500- \$9,999	\$10,000- \$14,999	\$15,000- and above
I Homestead Sale	56%	12%	16%	0%	12%	0%	4%	0%
II Civilian Homestead	13	10	16	19	10	10	6	16
III Veteran Homestead	8	8	8	8	17	25	17	8
IV Non- Homestead	16	19	6	6	25	13	9	6
All Farms	24	13	13	8	16	11	7	8
Peace River <sup>a</sup>	27	19	13	9	12	8	7	5

<sup>a</sup>See Table 15, D.B.S., 1966 Census of Canada, Agriculture, Alberta, Ottawa, May 1968.





basis of gross farm income, the Veteran Homestead group was the best performer , followed by the Non-Homestead, Civilian Homestead and Homestead Sale groups.

#### Sources of Farm Income

Crop sales constituted the major source of farm income on the sample farms except in the Non-Homestead group, where livestock sales constituted just over one half of total farm income (Table 16a and Table xxiv, Appendix). The older homestead groups (II and III) both averaged 29 percent of farm income from the sale of livestock and livestock products. The comparatively young Homestead Sale group (I) obtained only 9 percent of income from livestock sales.

Grains, in the order of wheat, barley, oats and others, provided a substantial part of the farm income in all groups. Large grains were the source of nearly one half of all income in Group I, but contributed only 20 - 30 percent in Groups II and IV. Group I sold a surprising amount of flaxseed, some rapeseed and no forage seeds whatsoever. Oilseeds, with an emphasis on rapeseed rather than flaxseed, constituted a significant income source in the other groups. Forage seeds, known to be an important source of income in the Peace, were important only for the "established" homestead groups II and III (18 and 15 percent, respectively).

All tenure groups received similar amounts of other farm receipts. However, the Homestead Sale group undoubtedly experienced proportionately more unfavourably crop returns than any other group; other receipts formed 21 percent of gross farm income. Income in kind or perquisites is the estimated market value of home-grown commodities consumed on the farm. It varied from three percent on Civilian and Veteran homesteads



Table 16a

## SOURCES OF GROSS FARM INCOME, BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Wheat	Oats	Barley	Rape- seed	Flax- seed	Forage Seed	Other Crops	Live- stock	Other Farm Receipts	Income in Kind
I Homestead Sale	26%	5%	18%	6%	8%	0%	0%	9%	21%	7%
II Civilian Homestead	15	9	4	8	6	18	3	29	5	3
III Veteran Homestead	20	4	13	10	1	15	0	29	6	3
IV Non-Homestead	9	1	9	6	2	3	3	51	8	8
All Farms	15	5	8	7	4	11	3	34	8	5



to seven and eight percent on Homestead Sale and Non-homestead farms.

### Total Farm Expenses

Farm expenses include taxes, interest on loans, rent, depreciation, wages, and expenditures on crops, livestock, machinery and equipment. The average for the sample population was \$4,954. Group IV reported the greatest expenditure, Group I the lowest (Table 15). The gross ratios (total expense/gross income) amounted to \$1.50, \$0.70, \$0.65 and \$0.99 in Groups I to IV, respectively.

The composition of farm expenses is available for only 89 farms (Table 17 and Table xxv, Appendix). Depreciation and farm machinery expenses account for the largest portion of farm expenses ranging from 41 percent in Group IV to 61 percent in Group I. These percentages appear high. It is possible that some capital expenditures were counted by the respondents as part of current expenses. Allowance may have to be made for this possibility.

Depreciation was calculated using a declining balance method for all farm machinery with the exception of small implements where a straight line depreciation was used. Cars were depreciated at 15 percent; trucks, tractors, grain combines, swathers and balers were depreciated at 12 percent. The depreciation rate of small implements was equivalent to the ratio of the sum of their purchase prices to the sum of the purchase prices for all farm machinery and equipment; hence the rate fluctuated from farm to farm.

Established homesteaders (Group II and III) reported the lowest gross ratios. In contrast, Non-homesteaders spent \$95 and the Homestead Sale farms spent \$147 per \$100 gross farm income. The relatively high





Table 17

FARM EXPENSES, BY INITIAL TENURE STATUS, I.D. 126, 1966<sup>a</sup>

Initial Tenure Status	Taxes	Int.	Cash Rent	Depre- ciation	Mach. Expense	Wages	Live- stock Expense	Crop Expense	Other Farm Expense	Total
	(\$ per \$100 Gross Farm Income)									
I Homestead <sup>b</sup>	\$4	\$5	\$4	\$45	\$45	\$16	\$3	\$15	\$11	\$147
II Civilian Homestead	3	3	1	21	17	11	3	7	5	71
III Veteran Homestead	4	3	1	13	18	6	3	3	6	58
IV Non-Homestead	4	9	2	22	16	6	13	12	11	95
All Farms	3	6	2	23	19	9	7	9	9	87

<sup>a</sup>Farms reporting farm expense composition only.<sup>b</sup>Gross Ratio = Total Expense/Gross Income



farm expenses in Groups I and IV may represent in part the effort of operators to control and improve land resources, thereby taking advantage of tax concessions for land improvements.

#### Net Farm Income

Net farm income is the difference between gross farm income and total farm expenses. Forty-eight percent of the operators reported negative net farm incomes for 1966. Only seventeen percent of Veteran homesteads experienced negative net farm income. In contrast, 40, 44 and 76 percent of the farms in Groups II, IV and I, respectively, reported negative net farm incomes.

The average net farm income for the sample was \$762 (Table 15). Civilian and Veteran homesteads reported similar levels of net farm income - \$2,342 and \$2,535, respectively. On the other hand, Homestead Sale farms sustained a loss of \$1,085 while farms in the Non-Homestead group just managed to clear their farm expenses by \$29.

Differences in net farm income may be due to several factors which need not reflect adversely on the managerial ability or the resource endowment of the various groups. Knowledge and use of accounting procedures may vary from group to group; in particular, capital expenses for machinery and land improvements might have been treated as operating expenses. Adjustments were not made for changes in inventory. Furthermore, the high level of farm expenses relative to gross farm income in Groups I and IV, may represent substantial reinvestments declared as farm expenses to take advantage of income tax concessions, and to accelerate the establishment of farms.



### Off-Farm Income

Off-farm income includes wages and salaries from nonfarm sources and employment on other farms, royalties, family allowances, pensions and welfare (Table 15). The main source was income derived from nonfarm employment and to a lesser extent, family allowances and pensions (Table xxvi, Appendix). Operator wages constituted 77 percent of total nonfarm income (87, 78, 70, and 69 percent, respectively in Groups I to IV). Veteran homesteaders were the only group with relatively high pension income.

The average off-farm income for the sample population was \$3,275. It ranged from zero to \$27,504. Seventeen percent of the operators did not report any off-farm income, the majority of these being Civilian homesteaders.

Generally, off-farm income was high for all groups. The incomes reported were well above the 1958 average farm family income from non-farm sources for the Prairie Provinces.<sup>1</sup> These high off-farm incomes reflect the opportunities for lucrative off-farm employment in the Peace River country. To some extent the high off-farm incomes may also reflect the need to supplement farm income with off-farm income. It should be pointed out that off-farm income was inversely related to net farm income.

### Family Income

In this study, family income is defined as net farm income plus off-farm income. It is a comprehensive measure of financial success of the family or the head of the family, regardless of the source of income.

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<sup>1</sup>J.M. Fitzpatrick and C.V. Parker, "Distribution of Income in Canadian Agriculture," Canadian Journal of Agricultural Economics, Vol. XIII, No. 2, 1965, p. 56.





Family income ranged from minus \$5,286 to \$23,523 (Table 15).

The average for the sample, \$4,048, was similar to the 1958 average farm family income for Alberta.<sup>1</sup> Veteran and Civilian homesteaders achieved similar levels of family income, \$5,226 and \$5,047. The Non-Homestead and Homestead Sale groups also reported similar levels of family income, \$3,362 and \$3,140, respectively.

Fifty-six percent of the operators in the sample had family income below the poverty line of \$3,750. In the four tenure groups, the percentage of families with family incomes below the poverty line was 52, 58, 33 and 66 percent in Groups I to IV, respectively.

Off-farm income formed 79 percent of family income for the sample population, and 132, 54, 52 and 99 percent for Groups I to IV, respectively. These values were substantially above the 1958 averages for Alberta, 23 percent.<sup>2</sup>

The large off-farm income component points out the need to supplement farm income with income derived from nonfarm sources. A nonfarm source of income appears virtually a prerequisite of homesteading.

Off-farm income was inversely related to net farm income. The same relation obtained for the length of time that the farm was in operation. The time period taken to overcome the dependence on off-farm income is a matter of conjecture. That off-farm income constitutes over 50 percent of family income on Civilian homesteads suggests that, ceteris paribus, the time period will be well over 20 years.

In summarising the observations in this chapter, one must conclude that the Veteran Homestead group was the best performer, followed by the

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<sup>1</sup>H. Buckley and E. Tihanyi, Canadian Studies for Rural Adjustment, Special Study #7 (Ottawa: Queen's Printer, 1967), p. 31.

<sup>2</sup>Ibid., p. 31.



Non-Homestead, Civilian Homestead and Homestead Sale groups. Veteran homesteads reported relatively high levels of gross farm income, net farm income and family incomes. They were able to operate at the lowest cost relative to their level of production. Moreover, a substantial proportion of these farmers were above the poverty line.

The high negative net farm income for farms in the Homestead Sale group confirms that at least in the initial stages of homesteading, farms operate at a loss. Operators must therefore rely on income from nonfarm sources to offset farm expenses and provide for a reasonable standard of living.

Given the length of time that Civilian homesteaders have been farming in the area, an inordinately high proportion of these farms were below the poverty line. Moreover rate of capital accumulation was well below the sample average.

Finally, farms in Groups I and IV appear to reinvest substantial investments into farm development. They spend as much or more than they receive. Hence these farms depend heavily on off-farm income or capital for family living expenses and farm investment.



## Chapter VI

### MEASURES OF RELATIONSHIPS

One objective of this study is to determine the association of the success of settlers with various factors or variables. Variables of interest may be those describing the natural and social environment, which must be taken as given, or they may be variables which, to a certain extent, may be manipulated and modified by human action. The latter are called instrumental variables. In order to determine if an undesirable situation can be changed by modifying certain variables it must be determined - (a) whether the variable in question is in fact a cause of the undesirable situation, e.g. a disturbing frequency of failures of settlers, and (b) whether the variable is in fact instrumental.

The fact that variables are associated with, or change in a similar fashion as, success does not necessarily imply that any causal relationship exists. Association may be purely accidental; it may be the indication of a common cause; a variable may be associated with farm success because it is itself caused by success.

Accidental relations may be found between the number of years of schooling and age - age being a natural variable, years of schooling being highly dependent upon the educational policies of the province. A possible association of farm success with success in other occupations may have the common cause of superior intellectual or





volitive qualities of a person. Insufficient capital available for farming may not be the cause of farm failure, but may be the consequence of it.

While association of variables may be measured and compared with mathematical accuracy by estimating correlation and regression coefficients and their variance, the choice of variables to be considered, the act of specification, must be based on other information, on general economic, sociological, psychological and educational theories, on evidence gathered for this specific purpose, and on special theories developed for the occasion. The tentative specification of variables is equivalent to the statement of a specific hypothesis. Empirical evidence then must be marshalled to test the hypothesis for correspondence with reality.

The test of the hypothesis consists of formal "statistical" tests, like Gosset's t-test, Fisher's F-test, Chi-square or whatever the occasion demands, and a test of consistency with postulated theory. The statistical test establishes the degree of confidence one may place in the estimate, usually in terms of the probability that the measure of relationship differs from zero.

The consistency test establishes that the measure of association determined complies with, or fails to comply with, the a priori theory assumed. It is frequently assumed, for example, that ceteris paribus, the amount of capital (resources) controlled by a farm operator is a cause of the volume of income the operator will be able to extract from his farm. A positive association of farm income and capital then would be consistent with this established theory; the evidence would confirm



the theory.

If the observations are not consistent with the theory, a number of possibilities will have to be considered. Sometimes inconsistency points towards statistical errors, sampling errors, multicollinearity of independent variables, or the use of an inappropriate statistical estimation model. The cause may be a deficiency in the measurement concept. In the capital-income relation for example, capital is frequently over-estimated, because it is based on an estimate of current or replacement value of assets, when the use of original investment (less depreciation) or actual use value is required.

The association tests thus may merely show that the method of measurement was not sufficiently accurate to confirm the postulated relation. On the other hand, if all possible sources of error have been examined and discarded, inconsistency of the empirical evidence does indeed cast doubt upon the initial hypothesis, and therefore upon the theory from which the hypothesis was derived in the first place. The results of the empirical tests thus may - (a) confirm and quantify a postulated relation, (b) it may not confirm a hypothesis but may disprove the method of testing, or (c) it may indeed disprove a hypothesis.

The farm success measures considered in this study are net farm income, family income, change in net worth, and level of living. The level-of-living index is a non-financial "objective" measure of the farm-household performance (see page 43).



### Analytic Technique

The main analytic techniques employed in this study are correlation and regression analyses. The technique of correlation analysis measures the closeness of association between pairs of variables. It aids in the early identification of relations. Only suspected relationships were correlated and a five percent chance of random association was set as the level of significance. Results are presented in Table 18 and Table xxvii, Appendix.

While correlation analysis is restricted to pairs of relationships, regression analysis handles more than two variables. A uni-directional relationship is postulated. Thus it may be hypothesised that the variable Y is a function of the variable X:

$$Y = f(X)$$

The objective of regression analysis is to predict values of Y for given values of X.<sup>1</sup> The general regression model can be represented by the following:

$$Y_i = b_0 + b_1X_{1i} + \dots + b_kX_{ki} + u_i \quad i = 1, 2, \dots n.$$

The associated assumptions are -

1.  $u_i$  is a random variable,
2.  $Eu_i = 0$  i.e. zero expectation for all i,
3.  $Eu_i^2 = \sigma_u^2$  i.e. constant variance for all i,
4.  $Eu_iu_j = 0$  i.e. zero covariance for  $i \neq j$ , and
5.  $X_i$  is an independent random variable and is independent of  $u_i$ .

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<sup>1</sup>E.J. Williams, Regression Analysis (New York: John Wiley & Sons, 1959), p. 2.





The underlying objective of regression analysis is to minimise the sum of squares of the residual or error term:<sup>1</sup>      
$$\text{Min. } \sum_{i=1}^n e_i^2$$

Therefore the method is called least squares analysis. A line (regression) which is estimated is fitted to the data by the least squares method. This regression line describes the average relationship between the Y and X variables and serves as a point of departure whereby estimates of the Y variable can be computed, given values of the X variables. The procedure of fitting the line and making estimates is referred to as regression analysis.

### Net Farm Income

#### Results of Correlation Analysis

Net farm income was highly correlated with family income, net worth (but not with level-of-living score), years of farming operation, machinery investment, total acreage, value of crop sales, value of livestock sales, gross farm income, off-farm income and total assets (Table 18). Net farm income is an integral part of family income, therefore as net farm income increases family income should also increase.

Net farm income increased in direct proportion to years of farming operation. Conceivably, over time unsuccessful farms leave the industry allowing for an accumulation of successful farms. In addition, experience is gained and more capital is invested in developing the farm. Therefore one should expect the older farms to report more net farm income than the younger farms.

Machinery investment was also directly related to net farm income. As farms are becoming established investment in farm machinery also

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<sup>1</sup>J. Johnston, Econometric Methods, (Toronto: McGraw-Hill Book Company, Inc., 1960), p. 11.



Table 18

CORRELATION COEFFICIENTS WITH NET FARM INCOME, FAMILY INCOME,  
NET WORTH, AND LEVEL OF LIVING, I.D. 126, 1966

Correlated Variables	Performance Measure			
	Net Farm Income	Family Income	Net Worth	Level-of- Living Score
	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>	Y <sub>4</sub>
Y <sub>1</sub> Net farm income	1.000	.584*	.529*	.141
Y <sub>2</sub> Family income		1.000	.434*	.177
Y <sub>3</sub> Net worth			1.000	.292*
Y <sub>4</sub> Level-of-living score				1.000
X <sub>1</sub> Years of farming operation	.248*	.026	.129	.155
X <sub>2</sub> Initial improved acreage	-.009	-.132	.219*	.133
X <sub>3</sub> Initial capital	-.176	-.083	.421*	-.078
X <sub>4</sub> Size of parents' farm	-.041	-.030	.114	-.016
X <sub>5</sub> Age	.130	-.072	.030	.013
X <sub>6</sub> Farming experience, years	.078	-.094	-.132	-.132
X <sub>7</sub> Social participation score	.033	.134	.200*	.226*
X <sub>8</sub> Years of schooling - operator	.024	.135	.087	.112
X <sub>9</sub> - homemaker	.014	.131	.181	.155
X <sub>10</sub> Nonfarm experience	-.078	.196*	.109	.026
X <sub>11</sub> Machinery investment	.200*	.270*	.667*	.249*
X <sub>12</sub> Total acreage	.457*	.406*	.819*	.216*
X <sub>13</sub> Improved acreage	.176	.307*	.616*	.190
X <sub>14</sub> Value of crop sales	.448*	.481*	.640*	.096
X <sub>15</sub> Value of livestock sales	.542*	.259*	.500*	.170
X <sub>16</sub> Gross farm income	.697*	.542*	.851*	.237*
X <sub>17</sub> Farm expenses	.110	.249*	.724*	.205*
X <sub>18</sub> Off-farm income	-.271*	.600*	.002	.074
X <sub>19</sub> Total assets	.440*	.424*	.967*	.283*
X <sub>20</sub> Total indebtedness	-.106	.152	.308*	.090

d.f. 98

\*Significant to the .05 level (  $r > .195$  )





increases.

Surprisingly, improved acreage was not significantly related to net farm income. However, total acreage was highly related to farm success; as acreage increased net farm income also increased.

By definition net farm income is the difference between gross farm income and farm expenses. In addition, the revenue from the sale of crops and livestock are the major components of gross farm income. Therefore one would expect the very high correlations between these variables and farm income.

Off-farm income was inversely related to net farm income. Net worth and total assets were directly associated with net farm income. This strong association of the latter two variables points to the overriding importance of capital to farm success. When operators referred to the lack of capital as a problem of major proportion, they had undoubtedly realized the importance of capital.

There were no statistically significant correlations between net farm income and measures of initial resource endowment ( $X_2$ ,  $X_3$ ), measures of education, and farm and nonfarm experience ( $X_8$ ,  $X_9$ ,  $X_4$ ,  $X_6$ ,  $X_{10}$ ). A weak but positive correlation is noted between operator's age and net farm income ( $X_5$ ). The association with farm expenses ( $X_{17}$ ) and indebtedness ( $X_{20}$ ), too, was unexpectedly weak.

#### Results of Regression Analysis

An estimation model was formulated as follows:

$$Y_1 = b_0 + b_1X_1 + b_3X_3 + b_6X_6 + b_8X_8 + b_{11}X_{11} + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + b_{19}X_{19} + u_i$$

(See Table 18 for key to subscripts.)

This regression was computed for each initial tenure group (Table 19).





Table 19

REGRESSION COEFFICIENTS FOR NET FARM INCOME, BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Intercept $b_0$	Regression Coefficients				$S_{\bar{y}_1}$	$S\hat{y}_1$	$R^2$
		$b_2$	$b_{13}$	$b_{14}$	$b_{15}$			
I Homestead Sale	-368.67	-26.48* (10.73)	-5.59 (3.35)	0.63** (0.21)	-1.50 (0.77)	1867	1381	54.4%
II Civilian Homestead	-691.39	-20.44 (18.71)	-3.03 (4.89)	0.56** (0.20)	0.71** (0.17)	5098	2920	71.6
III Veteran Homestead	441.14	2.51 (16.88)	-4.26 (2.74)	0.44* (0.20)	0.86** (0.16)	3893	1195	94.0
IV Non-Homestead	-178.99	6.33 (4.11)	-13.05** (4.33)	0.74* (0.33)	0.67** (0.16)	3442	2852	40.2
All Farms	-564.61	-1.94 (2.79)	-7.39** (2.29)	0.72** (0.11)	0.76** (0.09)	4036	2630	59.3

See Table 18 for key to subscripts.

 $S_{\bar{y}}$  is the standard deviation of the mean dependent variable. $S\hat{y}$  is the standard error of the regression estimate. $R^2$  is the multiple correlation coefficient.

\* Significant at the five percent level.

\*\* Significant at the one percent level.



Variables that did not make a significant contribution were eliminated when the final equations were recomputed.

While the regression equations computed seem to be acceptable as predicting equations if formal statistical criteria are applied, a logical test turns up a number of inconsistencies. Coefficients  $b_{14}$  (crop sales) and  $b_{15}$  (livestock sales) are positive and less than 1.0; this is consistent with the fact that these two variables are components of gross farm income. Coefficient  $b_{15}$  in Group I must be excluded here, for it is negative. Moreover statistically the estimate is hardly significant; it should be remembered that livestock sales constitute a very small part of farm sales in this group.

The fact that improved acreage was, in all groups, negatively regressing on net farm income, is much more disconcerting. From all knowledge of farming one would expect a positive association. The possibility of multicollinearity between  $X_{13}$  and  $X_{14}$  must be suspected, since the inter-correlation is high (Table xxvii, Appendix).

The regression of initial improved acreage was statistically significant only in Group I. Like current improved acreage, the regression coefficient is negative, a fact for which no ready theoretical justification may be found. In the case of current improved acreage it may be that farms which still do a great deal of land improvement, primarily the "young homestead" Group I, declared a considerable part of land clearing costs as expenses (as the Income Tax Act permits them to do). Hence the more land being cleared, the more would net farm income be diminished. Only a closer analysis of the components of farm expenses could clarify this point.

The average marginal returns for crop and livestock sales in the





sample were nearly alike - \$0.72 and \$0.76 per dollar gross sales, respectively. However, the differences within groups were considerable; they varied from \$0.07 in Group IV to \$0.15, \$0.42 and \$0.87 in Groups II, III and I. Farms in the Non-Homestead group were the most efficient crop producers securing \$0.74 per dollar of crop sold, followed by Groups I, II and III. On the other hand, Veteran homesteads seemed markedly efficient in livestock production netting \$0.86 per dollar of livestock sold. Civilian homesteads and Non-homestead farms obtained \$0.71 and \$0.67 respectively; Homestead Sale farms were losing \$1.50 per dollar of livestock sold. On the whole, however, Non-homestead farms appeared to have the best balance of crop and livestock production, followed by Veteran and Civilian homesteads, and Homestead Sale farms.

Fifty-nine percent of the variation in net farm income in the sample was explained by the variables  $X_2$ ,  $X_{13}$ ,  $X_{14}$  and  $X_{15}$ . Between groups the multiple correlation coefficient varied from 40 percent in Group IV to 94 percent in Group III. The estimating errors were reduced<sup>1</sup> by 35 percent in the sample and by 26, 43, 70 and 21 percent in Groups I, II, III and IV respectively. All equations were significant at the five percent level.

### Family Income

#### Results of Correlation Analysis

Family income (the sum of net farm and off-farm incomes) was significantly correlated with several variables. These included off-farm

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<sup>1</sup>Reduction of the estimating error is equal to  $\frac{S_{\bar{y}} - S_{\hat{y}}}{S_{\bar{y}}} \cdot 100$

The standard deviation,  $S_{\bar{y}}$ , is a measure of the reliability of using average,  $\bar{y}$ , for predicting any  $y_i$  for individual farms. Regression analysis helps improve estimates of  $Y_j$  by using a regression function and specific variables,  $X_{ij}$ .





income, nonfarm experience, machinery investment, total and improved acreages, values of crop and livestock sale, gross farm income, farm expenses, net worth, and total assets (Table 18).

Nonfarm experience or training is comprised of four categories - no nonfarm experience, unskilled labour, tradesman, and managerial or professional experience.<sup>1</sup> Not only was this variable significantly correlated with family income but it was also highly correlated with off-farm income (Table xxvii, Appendix). The more nonfarm experience the operator had, the larger would be his off-farm income, hence family income. Moreover, the weak inverse relationship that exists between nonfarm experience and net farm income suggests that operators with nonfarm skills employ a significant proportion of their time in those fields rather than in farming.

Family income increased in direct proportion to machinery investment, total and improved acreage, and farm expenses. Contrary to the relations ascertained for net farm income, total family income is not at all correlated with years of farming ( $X_1$ ). Yet there is a positive, though weak, correlation with the educational level of both operator and wife ( $X_8$ ,  $X_9$ ), and the social participation score ( $X_7$ ).

#### Results of Regression Analysis

The initial model was defined as follows:

$$Y_2 = b_0 + b_8X_8 + b_{10}X_{10} + b_{12}X_{12} + b_{13}X_{13} + b_{16}X_{16} + b_{18}X_{18} + b_{19}X_{19} + u_1$$

(See Table 18 for key to subscripts.)

The main variables contributing to the prediction of family income in the final model were improved acreage, gross farm income, off-farm income, and total assets -  $X_{13}$ ,  $X_{16}$ ,  $X_{18}$ , and  $X_{19}$  (Table 20).

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	Score		Score
<sup>1</sup> No nonfarm experience	0	Skilled labour/Trade	2
Unskilled labour	1	Professional/Managerial	3

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Table 20

REGRESSION COEFFICIENTS FOR FAMILY INCOME, BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Intercept $b_0$	Regression Coefficients			$S_{\bar{y}_2}$	$S_{\hat{y}_2}$	$R^2$
		$b_{13}$	$b_{16}$	$b_{18}$	$b_{19}$		
I Homestead Sale	-183.57	-6.63 (3.65)	0.42* (0.17)	0.97** (0.11)	-0.02 (0.03)	1753	3761
II Civilian Homestead	-165.61	-7.44 (5.08)	0.57** (0.18)	0.76** (0.13)	0.03 (0.03)	2774	6284
III Veteran Homestead	1044.28	-3.53 (3.42)	1.05** (0.13)	0.91** (0.14)	-0.09* (0.04)	1267	4030
IV Non-Homestead	170.77	-7.36 (3.68)	0.62** (0.16)	0.82** (0.11)	-0.02 (0.02)	2558	4602
All Farms	-48.57	-5.91** (2.19)	0.74** (0.08)	0.81** (0.06)	-0.02 (0.01)	2542	4970

See Table 18 for key to subscripts.



The contribution of improved acreage to family income was similar to that for the net farm income model. Similar comments apply here.

When gross farm income increased by \$100, family income in the sample increased by \$74. Veteran homesteads sustained the highest returns - \$105, followed by Groups IV, II and I respectively.

One result that was consistent in all strata of the sample, was the strong relation between off-farm income and family income. Theoretically,  $Y_2 = Y_1 + X_{18}$ . If this additive relation prevailed,  $b_{18}$  should be unity. This result applies closely only on Homestead Sale farms. In the other groups,  $b_{18}$  is less than unity, suggesting that part of the off-farm income is offset by implicit factors. It may be recalled that off-farm income represented 132 percent of family income in Group I and 54, 52, and 81 percent in Groups II, III and IV, respectively. As with gross farm income, all off-farm income regression coefficients were significant at the five percent level.

The average returns to capital on sample farms were negative except for Group II. Additional farm capital brought a loss of two percent on sample farms. Veteran homesteads seemingly experienced the largest loss, nine percent, as against two percent for Groups I and IV. The regression of family income on capital on Civilian homesteads indicated a rate of return on capital of three percent. Thus, given l'etat des arts, additional investment in land improvements and increases in farm capital through borrowing might have resulted in a decline in family income. The possibility of multicollinearity between  $X_{13}$ ,  $X_{16}$  and  $X_{19}$  should not be excluded.

Three-quarters of the variation of family income in the sample were explained by the four variables postulated in the model. Between groups





the multiple correlation coefficient,  $R^2$ , ranged from 73 percent in Group IV to 94 percent in Group III; all estimates of the regression function were significant at the five percent level. The standard errors of the regression estimates were reduced by 49 percent for all farms, and 53, 56, 69 and 44 percent in Groups I to IV respectively.

### Net Worth

#### Results of Correlation Analysis

Net worth was directly related to value of crop and livestock sales, gross farm income, net farm income, and family income but not to off-farm income (Table 18). It was positively correlated to several capital measures like initial improved acreage, initial capital, machinery investment, total and improved acreage, total assets and indebtedness. Other statistically significant correlations were established with the level-of-living score, ( $Y_4$ ) - farm expenses, and the social participation score.

One would have expected a strong positive relation between net worth and off-farm income since farms were so heavily dependent on off-farm income. However, there was no relationship between these two variables.

The positive relationship between net worth and level of living suggests that as net worth increases the level of living of the farm family also increases. Similarly, participation in community affairs also increases with increases in owner equity.

The positive relationships between net worth and initial improved acreage and initial capital are to be expected. The larger the initial land improvement, and capital, the greater would be the real estate value



of the holding. Net worth is a direct reflection of farm value. The same explanation holds for total and improved acreage.

Since by definition net worth is the difference between total assets and indebtedness, net worth should be inversely correlated with indebtedness. In other words, as indebtedness increases net worth should decrease. The positive correlation implies that no such simple additive relation exists. Two possibilities may therefore explain this relationship. Either operators borrow more the greater their net worth, or net worth increases with increasing use of loan capital.

Machinery investment is a component of total assets and net worth, hence the high correlation coefficient between machinery investment and net worth is to be expected. As net worth increases, crop and livestock production also increase, resulting in greater sales of these commodities. The same relationship exists for gross farm income.

#### Results of Regression Analysis

Initially the model for predicting net worth was specified as follows:

$$Y_3 = b_0 + b_{y2}Y_2 + b_3X_3 + b_9X_9 + b_{11}X_{11} + b_{12}X_{12} + b_{13}X_{13} + b_{16}X_{16} + b_{17}X_{17} + b_{18}X_{18} + b_{20}X_{20} + u_i$$

(See Table 18 for key to subscripts.)

The final results are given in Table 21. Variables that did not make a significant contribution to the explanation of net worth,  $Y_3$ , were omitted from the final model.

Total acreage was especially important in the sample in general and on Homestead Sale farms in particular. In the case of the latter farms, an increase in farm size of 100 acres resulted in an increase in net worth of \$3,200. In contrast, a similar acreage increase on Veteran



Table 21

REGRESSION COEFFICIENTS FOR NET WORTH, BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Intercept $b_0$	Regression Coefficients				$S_{\bar{y}_3}$	$S_{\Delta y_3}$	$R^2$
		$b_{12}$	$b_{13}$	$b_{16}$	$b_{20}$			
I Homestead Sale	345.31	32.31** (9.47)	40.85 (22.69)	1.96 (1.02)	-1.59* (0.68)	19,703	11,065	73.7%
II Civilian Homestead	-1,314.04	1.99 (1.34)	66.52 (36.26)	2.81* (1.14)	-0.87 (0.55)	47,592	19,521	85.4
III Veteran Homestead	17,750.71	-3.17 (13.98)	67.00 (34.16)	0.67 (1.33)	-1.03 (0.47)	20,088	12,801	74.2
IV Non-Homestead	4,129.07	7.33 (4.66)	59.16 (28.89)	2.38* (1.16)	-0.08 (0.34)	32,159	17,090	75.4
All Farms	2,519.28	10.83** (3.14)	53.63** (13.92)	2.30** (0.54)	-0.31 (0.20)	34,725	16,570	78.1

See Table 18 for key to subscripts.





homesteads reduced net worth by \$317.

As was expected, the contribution of improved acreage to net worth was large indeed since appreciation in land values due to land improvements appears in the net worth of the farm. Civilian and Veteran homesteads averaged the same net worth increases of \$6,700 per 100 acres increase of improved land. Non-homestead and Homestead Sale farms averaged increases of \$5,916 and \$4,105 per 100 acres increase of improved land.

The regression established between gross farm income and net worth, ( $b_{16}$ ), varied considerably from group to group; net worth increased by as much as \$281 per \$100 increase in gross farm income on Civilian homesteads and \$67 on Veteran homesteads. The sign and magnitude of the overall regression coefficient suggest that net worth is a positive function of gross farm income.

Operators overwhelmingly pointed to lack of capital as one of the biggest handicaps on farms. Yet, given the combination of resources prevailing on sample farms, and the variables specified in the final net worth regression model, additional loan capital reduced net worth fractionally. Reduction in owner-equity per \$1,000 loan capital varied from \$80 on Non-homestead farms to \$870, \$1,030 and \$1,590 in Groups II, III and I. Within the sample the rate of reduction was \$310.

Although the regression coefficients for loan capital, ( $b_{20}$ ), were negative, the relation does not necessarily mean that borrowing reduces net worth. A reduction only results if the other factors specified are held constant.

Assuming that \$1,000 are borrowed to improve land at \$40 per acre. Then the resulting 25 acres of improved land would add \$1,340.75 ( $25 \times \$53.63$ ) to net worth. At the same time,  $b_{20}$  suggests that net worth



would decline by \$310 per \$1,000 borrowed. Therefore the net addition to net worth is \$1,030.75. This calculation is merely illustrative. If the out-of-pocket costs were higher, the gain in net worth would be correspondingly lowered. Furthermore, loan capital used for other purposes would have different effects upon farm returns and net worth. The regression model as stated provides only over all estimates.

In all homestead groups  $b_{20}$  was estimated considerably less favourable than for the sample as a whole. This finding may be indicative of low efficiency in the use of borrowed capital. However it is not certain whether this low efficiency is due to technical inefficiency, too little borrowed, or too much. Only a restatement of the estimating model and careful analysis of the data, can confirm these tentative results as variable specification and unsuspected statistical interaction may also be responsible.

### Level of Living

#### Results of Correlation Analysis

A relatively small number of variables were significantly related to level of living (Table 18). These variables include social participation score, machinery investment, total acreage, gross farm income, farm expenses, and total assets.

It is expected that social participation will increase with increases in the level-of-living index. The same outcome is also expected for increases in farm size - acreage, gross farm income and farm assets.

It may be recalled that of all the success measures, net worth was the only measure that was significantly related to level of living. Indeed, the high correlations between the level-of-living score and farm





assets - net worth and total assets, suggest that the level-of-living index is pegged to these variables.

### Results of Regression Analysis

The regression function specified for the level of living was as follows:

$$Y_4 = b_0 + b_{y_2}Y_2 + b_{y_3}Y_3 + b_1X_1 + b_7X_7 + b_9X_9 + b_{11}X_{11} + b_{12}X_{12} + b_{16}X_{16} + b_{19}X_{19} + u_1$$

(See Table 18 for key to subscripts.)

Explanation for the level-of-living index,  $Y_4$ , was limited indeed. The final equations are given in Table 22. For the entire sample, only ten percent of the variation of the level-of-living index was explained by net worth, improved acreage, gross farm income and off-farm income. This explanation was equivalent to a reduction of two percent in the estimating error. Within groups, the association of variables as measured by  $R^2$  was somewhat higher. The corresponding reduction of the estimating errors were 12, 10, 31 and 12 percent respectively for Groups I to IV. Only the equations for Veteran Homestead and Non-Homestead groups were significant at the five percent level.

Net worth made a positive, yet small, contribution to the level-of-living index in the sample as a whole and in all groups save Veteran homesteads. An increase of \$1,000 in net worth was associated with an increase in the sample index of 0.04 units (Table 22).

Improved acreage made negative contributions in the sample, especially on Non-homestead farms. When improved land expanded by 100 acres, the sample average declined by 0.3 unit. Within tenure groups the index rose by 0.2, 0.6, and 1.1 unit in Groups I, II and III respectively, but it declined by 1.0 unit in Group IV. In Groups III and IV the regression





Table 22

REGRESSION COEFFICIENTS FOR LEVEL OF LIVING SCORE, BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Intercept $b_0$	Regression Coefficients				$S_{\bar{y}_4}$	$S_{\hat{y}_4}$	$R^2$
		$b_{y3}$	$b_{l3}$	$b_{l6}$	$b_{l8}$			
I Homestead Sale	12.72	0.01 (0.06)	0.231 (0.817)	0.10 (0.39)	0.80* (0.27)	3.62	3.18	41.2%
II Civilian Homestead	14.74	0.05 (0.05)	0.642 (0.849)	-0.35 (0.32)	-0.09 (0.22)	4.82	4.80	14.5
III Veteran Homestead	13.70	-0.07 (0.04)	1.079* (0.349)	0.07 (0.16)	0.16 (0.19)	2.22	1.53	69.6
IV Non-Homestead	15.96	0.04 (0.04)	-0.981* (0.465)	0.49* (0.23)	0.15 (0.13)	3.92	3.44	33.0
All Farms	15.66	0.04 (0.02)	-0.297 (0.333)	-0.05 (0.14)	0.08 (0.99)	4.03	3.91	9.9

See Table 18 for key to subscripts.

b - coefficients measure regression of level-of-living score per \$1,000.



coefficients were significant at the five percent level.

Regression of the level-of-living score on gross farm income was positive in the sample and all tenure groups except Civilian Homestead. An increase of \$1,000 in gross farm income on sample farms added 0.1 unit to the level-of-living index. Within groups, the index rose by 0.1 unit in Groups I and III and 0.5 unit in Group IV. In the case of the Civilian Homestead group, the index fell by 0.4 unit. The contribution in Group IV was significant at the five percent level.

Only in Group I was off-farm income directly related to level of living. When off-farm income rose by \$1,000, the sample average increased by 0.8 unit. The estimated coefficients did not differ significantly from zero in the other groups. These results appear plausible if it is remembered that most Homestead Sale farms are in a state of transition into a farming way of life. Their life style, as measured by the level-of-living score, is still substantially supported by, and hence related to, off-farm income.



## Chapter VII

### CONCLUSIONS AND IMPLICATIONS FOR POLICY

This study was a first attempt to determine factors associated with successful settlement in the Valleyview District on the Southern Fringe of the Peace River Region of Alberta. Success was defined as the establishment of a viable farm within a reasonable period of time, the ability to generate farm income sufficient to support a family at a level above generally recognized poverty levels, support of a reasonable standard of living and a way of life considered desirable by people in the area. Ultimately, economic success must be measured in terms of the ability of human energy and private capital invested in the settlement venture to return benefits, equal to or exceeding, the benefits obtainable elsewhere from the use of both private and public resources (social efficiency).

It must be recognized, however, that the individuals engaged in settlement do not necessarily define their goals in the same terms. Consequently, they may not only measure their goal achievement in different terms, but will purposely direct their energies towards the realization of the goals they themselves consider desirable. The potential divergence of postulated "objective" goals and private goals is a possible source of discrepancy between general and individual measures of goal achievement.

Time limitations precluded an exhaustive analysis of the data





obtained in a 1967 farm survey covering 100 farms in the study area. To simplify the analysis, farm success was measured in terms of farm and family incomes obtained, net worth accumulated, and the level of living achieved. Success was compared between four discernible groups of farmers resident in the area, described as Homestead Sale, Civilian Homestead Lease, Veteran Homestead Lease, and Non-Homestead farmers.

The Homestead Sale group included all those civilian homesteaders who had obtained their homestead unit under the provisions of the Alberta Land Act of 1956. As a conditional purchase contract, the Homestead Sale eventually replaced the Homestead Lease in 1963. The operators in this group, comprising 25 percent of all farmers in the sample, had been on their respective farms for the shortest period of time.

The Civilian Homestead Lease group comprised 31 percent of the sample. They averaged the longest period of residence on their respective farms, the longest period being given as 40 years. Many farmers among this group thus began under general economic conditions and with expectations substantially different from those of the younger group. On the other hand, they were a group with considerable farming experience. They have had many years to improve their farming techniques, to accumulate capital and to improve their land, albeit under less favourable starting conditions than the younger group.

The Veteran Homestead Lease group included only 12 percent of the sample. These operators were veterans of World War II who had decided to take advantage of the land grant policy of the Alberta government; they also had access to financial, educational and advisory support provided under the Veterans' Act.

The last group was the largest - 32 percent - but the most diverse



group. It included second-generation farmers who had either inherited the original farm or had bought farms already patented. Thus they started out with a considerable quantity of productive farm resources, improved land and other farm capital. A few respondents in this group operated grazing and cropping leases owned by the Crown, or private leases. These tended to be well-capitalized large-scale operators.

However, the majority of farmers interviewed were "typical" settlers and family farmers in the traditional image. They had voluntarily chosen to brave the hardships and sacrifices one expects from homesteading in the bush. While most of them disclaimed any overriding financial reasons for homesteading, their expectations - "to make a reasonable living", to achieve outright ownership of a well-improved farm, and an estate which could be passed on to their heirs - certainly are "rational" economic goals to be pursued.

### Conclusions

In general, Veteran homesteaders have emerged as the best performers by far. They enjoyed the highest level of nonfarm experience and formal education. Coupled with a reasonable amount of capital of their own and loan capital at the commencement of farming, these operators were able to develop their farms in a relatively short period of time. Thus, the first hypotheses that nonfarm training or experience and years of schooling enhance farm success cannot be rejected.

Operators who obtained their farms through private arrangements began to farm with a substantial portion of capital and improved land. (Veteran homesteaders to a lesser extent also had improved land that was of some importance.) This initial land improvement supported by a





relatively strong capital position enabled these operators to accelerate the development of their farms. Hence at the time of the survey they enjoyed the largest capital and equity position. Results of the regression analyses also put them in a more favourable light than non-veteran homesteaders. When it is realised that Civilian homesteaders were farming in the area for the longest time and capital accumulation was so low, it is concluded that among other things, the initial supply of productive resources was crucial to farm success.

Annual reports of the Department of Lands and Forests (1940 and 1947) suggested that lack of capital is a problem of major proportions on homesteads. In 1967 farm operators still pointed to the lack of capital as the greatest impediment to farm success. Neither the Homestead Lease nor the Homestead Sale contract are accepted as collateral for loans until title is granted. On the other hand, Veteran homesteaders have access to substantial credit under the Veterans' Loan Act. Non-homesteaders also had access to the credit market. Therefore the hypothesis that the homesteading policy as applied to non-veterans hinders the flow of capital to the farm is not rejected.

Working in nonfarm employment appears to be directly related to the need for off-farm income and the degree of nonfarm training of the operator. Given the fact that off-farm income exceeded net farm income in all tenure groups and the fact that most operators worked occasionally or frequently in nonfarm occupations, it is concluded that most operators were forced to work off the farm to supplement farm income. However, it is also evident that non-veteran homesteaders appear to be more dependent on off-farm work than the other operators. The negligible initial productive farm resource endowment on non-veteran homesteads must of





necessity reduce the rate of farm development. Moreover, after farming for an average of 18 years, the Civilian homesteaders still had to rely heavily on off-farm income to supplement farm income.

The very fact that operators on Homestead Sale farms and Civilian homesteads were not performing as well as Veteran homesteaders and Non-homesteaders, suggests that efficient use is not being made of private and public resources. Therefore the hypothesis that the civilian homestead policy does not allow for the efficient use of private and public resources is not contradicted.

The analytical model has failed to give adequate explanation of the level-of-living index. The level of living seems more related to farm assets rather than cash income. Explanations must be found for the negative regression coefficients for initial and current improved acreages. These unexplained results point the way for further research.

#### Implications For Policy

Objectives of current homesteading policies are not clearly defined. Since achievement or performance is better interpreted in relation to objectives, policy objectives should be clearly specified.

Greater emphasis should be put on the selection and training of prospective settlers. The success of any land settlement scheme in the Peace River will depend on the adaptability of settlers to the harsh farming conditions of the north. Homesteaders should therefore be selected on the basis of ability and capacity to succeed in order to avoid failure costly and inequitable to the settlers themselves, and indirectly to the public, because capital as well as productive capacity is being wasted.

There should be a minimum requirement of formal education and farming experience. Years of farming experience bear little relation to farm



success, therefore emphasis should be put on the quality of farming experience. Prospective homesteaders should be trained at the local agricultural colleges and universities, perhaps in special short courses. In addition agricultural courses should be arranged periodically at suitable locations for homesteaders, similar to the work done by the Veterans' Administration.

Nonfarm experience or training should also receive some consideration. Skilled and managerial or professional training may assume considerable import in marginal farming areas. Nonfarm training undoubtedly contributed to the success of Veteran homesteaders.

Ways and means must be found to ameliorate the problem of farm capital. The Homesteading policy should demand a minimum level of owner capital of prospective homesteaders. Once an applicant is successful, means must be found to furnish him with the additional capital considered necessary for rapid farm development. The Homestead Loan Act falls short of meeting the shortage of capital on farms. If there is a genuine desire to continue the practice of homesteading then more capital will have to be funnelled into homesteads.<sup>1</sup>

Cultivation duties are unrelated to the realities of present day farming. These duties should be updated. Indeed, a case can be made for providing the prospective homesteader with a farm that has a substantial amount of improved land. This pre-development can be done through government contracts. Alternatively, the government could provide the prospective homesteader with the capital to develop the land. Either way the homesteader will have to pay the cost of the land improvement.

Greater coördination is required between the Departments of Highways,

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<sup>1</sup>Apparently this has been recognized because the Department of Lands and Forests has discontinued altogether the Land Clearing Loan program. At present the Provincial Government has established a Land Improvement Loan Guarantee program under the federal-provincial ARDA agreement.





and Lands and Forests. All-weather roads and drainage and irrigation works should be established before homestead entry is granted, or immediately thereafter. In this regard it would be advantageous to restrict physical entry to the settlement until sufficient numbers of operators can begin farming simultaneously. The latter requirement would make the provision of social services economically feasible and politically acceptable.

Some settlement farms succeed only because off-farm income can be depended upon to pay for improvements and necessary farm operating and living expenses. If in fact successful farming in the Peace River depends on a constant supply of off-farm income the scope for off-farm employment should be ascertained before opening lands to homestead entry. However, there may be a danger of eventual failure where dependence on off-farm income is so vital to survival.

There is need to explore the possibilities of improving livestock and grain marketing in the area. Such a study should suggest ways of reducing marketing costs and improving farm prices. The feasibility of establishing a grain elevator in Valleyview should also be determined.

Perhaps studies should be initiated to determine the suitability of the region for agricultural production. The soils are relatively unproductive and a substantial proportion of the farmers listed poor weather as a grave farming problem. Since there are alternative uses for private and public resources, research should also establish what constitutes an economic unit and the best resource mix for farming success. The provision that 50 percent of the homestead be arable is too broad; it still results in uneconomic units.

Finally it may be necessary to assess the extent of land speculation in the Peace River and its impact on land prices. Real or imagined, a significant proportion of the operators in the sample considered land speculation as being a grave farming problem in this area.





APPENDIX

A



Table 1

## USE OF IMPROVED ACREAGE BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Percentage of Improved Acreage						
	Wheat	Oats	Barley	Flax- seed	Rape- seed	Forage Seed	Hay Others <sup>a</sup>
I Homestead Sale	11%	6%	14%	4%	3%	1%	60%
II Civilian Homestead	13	8	8	5	3	18	42
III Veteran Homestead	10	5	13	1	4	11	38
IV Non-Homestead	10	8	21	3	6	6	39
All Farms	11	7	14	4	4	10	43

<sup>a</sup>Fallowed and permanent pasture.



Table ii

AVERAGE LONG TERM YIELDS REPORTED,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Wheat	Oats	Barley
	(bushels per acre)		
I Homestead Sale	26	46	35
II Civilian Homestead	19	43	30
III Veteran Homestead	28	48	30
IV Non-Homestead	22	42	33
All Farms	22	44	32
Standard Deviation	8	15	11
Minimum	8	20	8
Maximum	40	80	75

Table iii

AVERAGE AGE OF OPERATOR, YEARS OF FARMING EXPERIENCE,  
AND SIZE OF PARENTS' FARM, BY INITIAL TENURE  
STATUS, I.D. 126, 1967

Initial Tenure Status	Age	Farming Experience	Size of Parents' Farm
		(years)	(acres)
I Homestead Sale	39	14	362
II Civilian Homestead	47	27	200
III Veteran Homestead	51	20	432
IV Non-Homestead	42	23	415
All Farms	44	22	337
Standard Deviation	12	13	378
Minimum	22	1	0
Maximum	83	53	1,920





Table iv

FARM BACKGROUND OF OPERATORS AND HOMEMAKERS,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Type of Parental Farm of Operator			Wives who grew up <sup>b</sup> on farms
	No Farm Background	Specialised <sup>a</sup> Farms	Diversified Farms	
I Homestead	16%	16%	68%	76%
II Civilian Homestead	16	6	78	87
III Veteran Homestead	17	8	75	64
IV Non-Homestead	6	3	91	82
All Farms	13	8	79	77

<sup>a</sup>Dairy, beef, crops.

<sup>b</sup>Percent of operators who were married.



Table v

NONFARM EXPERIENCE, BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	No Nonfarm Experience	Unskilled Labour	Skilled Labour	Professional or Managerial
I Homestead Sale	8%	32%	44%	16%
II Civilian Homestead	23	19	58	0
III Veteran Homestead	0	33	50	17
IV Non-Homestead	12	38	44	6
All Farms	13	30	49	8

Table vi

OFF-FARM EMPLOYMENT, BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Off-farm Employment <sup>a</sup>		
	Never	Seldom	Frequently
I Homestead Sale	8%	8%	64%
II Civilian Homestead	29	6	42
III Veteran Homestead	25	0	67
IV Non-Homestead	28	9	38
All Farms	23	7	49

<sup>a</sup>Response to Question #14 - Since you took over this farm have you held permanent jobs off the farm?



Table vii

## LEVEL OF LIVING COMPONENTS

Condition of House			Score
1.	Age	30 years and above	1
		20 - 29 years	2
		10 - 19 years	3
		5 - 9 years	4
		4 years and below	5
2.	Number of bedrooms		
		one room	1
		two rooms	2
		three rooms	3
		four rooms	4
		five rooms	5
3.	Type of construction		
		log	1
		part-log	2
		frame	3
		frame and concrete	4
		concrete	5
4.	General condition		
		poor	1
		fair	2
		good	3
		excellent	4
5.	Electricity	no	0
		yes	1
6.	Telephone	no	0
		yes	1
7.	Television	no	0
		yes	1
8.	Running water	no	0
		yes	1
9.	Power washer	no	0
		yes	1
10.	Refrigerator	no	0
		yes	1
11.	Flush toilet	no	0
		yes	1
12.	Indoor bath	no	0
		yes	1
	Maximum score		<u>27</u>





Table viii

FREQUENCY OF USE OF FAMILY LABOUR,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Use of Family Labour			
	Never	Seldom	Occasionally	Frequently
I Homestead Sale	28%	8%	4%	60%
II Civilian Homestead	23	7	10	60
III Veteran Homestead	17	0	8	75
IV Non-Homestead	25	0	0	75
All Farms	24	4	5	67

Table viiia

USE AND ATTITUDE TOWARDS HIRING FARM LABOUR,<sup>a</sup>  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Farmers Hiring Extra Labour	Farmers Experiencing Difficulty in Obtaining Extra Labour		
		All Farmers	Farmers Hiring Labour	Farmers Not Hiring Labour
I Homestead Sale	28%	36%	57%	28%
II Civilian Homestead	33	26	61	9
III Veteran Homestead	67	50	75	0
IV Non-Homestead	41	25	54	5
All Farms	38	31	61	13

<sup>a</sup>Responses to Question #17b - Do you experience any difficulty in obtaining extra labour?



Table ix

OPERATOR'S RATING OF OWN MANAGERIAL ABILITY,<sup>a</sup>  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Fair	Average	Very Good	Excellent
I Homestead Sale	46%	50%	4%	0%
II Civilian Homestead	45	48	7	0
III Veteran Homestead	42	50	8	0
IV Non-Homestead	66	25	9	0
All Farms	51	41	7	0

<sup>a</sup>Response to Question #38 - How do you rate yourself as a manager?

Table x

FARMER'S ATTITUDE TO "MAKING MONEY",<sup>a</sup>  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Yes
I Homestead Sale	44%
II Civilian Homestead	39
III Veteran Homestead	17
IV Non-Homestead	31
All Farms	35

<sup>a</sup>Response to Question #42a - Is making money one of your most important objectives?



Table xi

FARMING GOALS AND OBJECTIVES,<sup>a</sup> BY INITIAL TENURE STATUS,  
I.D. 126, 1967

Initial Tenure Status	Make a decent living	Clear more land and improve hstd.	Develop mixed farm	Establish economic unit	Others
I Homestead Sale	25%	41%	17%	13%	4%
II Civilian Homestead	37	10	20	0	33
III Veteran Homestead	46	9	0	27	18
IV Non-Homestead	30	16	16	19	19
All Farms	33	20	15	12	20

<sup>a</sup>Responses to Question #42b - What other farming goals and objectives do you have?

Table xii

FARMING CHARACTERISTICS ENJOYED MOST,<sup>a</sup>  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Living in the country	Being your own boss	Working with animals	Satis. of growing things	Work out-doors	Being able to work by yourself	Other than above
I Homestead Sale	32%	36%	-	16%	8%	8%	-
II Civilian Homestead	36	45	3%	10	3	-	3%
III Veteran Homestead	33	33	-	17	17	-	-
IV Non-H Homestead	25	56	9	3	3	-	3
All Farms	31	45	4	10	6	2	2

<sup>a</sup>Responses to Question #43 - Which one of the following characteristics do you enjoy most?





Table xiii

OPERATORS' ATTITUDES TO CREDIT,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure	Operators who could borrow		Operators who could not borrow	
	Could <sup>a</sup>	Would <sup>b</sup>	Could <sup>a</sup>	Would <sup>b</sup>
I Homestead Sale	88%	95%	12%	33%
II Civilian Homestead	84	93	16	75
III Veteran Homestead	92	73	8	0
IV Non-Homestead	94	87	6	100
All Farms	89	89	11	60

Responses to Question #34 and 35 - <sup>a</sup>Could you borrow additional funds if you so desired?

<sup>b</sup>Would you borrow additional money if it appeared profitable?

Table xiiia

MOST DEPENDABLE SOURCES OF CREDIT,<sup>a</sup>  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Bank	F.I.L.A.	F.C.C.	Credit Union	Alberta Farm Purchase Board	Other Sources
I Homestead Sale	74%	4%	13%	4%	0%	4%
II Civilian Homestead	76	7	3	3	3	7
III Veteran Homestead	75	8	0	8	0	8
IV Non- Homestead	74	13	7	3	0	3
All Farms	75	8	6	4	1	5

<sup>a</sup>Response to Question #33 - Which are your most dependable sources of credit?



Table xiv

GREATEST DIFFICULTIES ON FARMS EXPERIENCED BY FARM OPERATORS,<sup>a</sup> I.D. 126, 1967

Initial Tenure Status	Lack of Capital	Lack of Experience	Poor Soil	Poor Weather	Insufficient Land	Other than above	No Response
I Homestead Sale	76%	0%	4%	12%	4%	4%	0%
II Civilian Homestead	65	0	13	20	0	3	0
III Veteran Homestead	92	0	0	8	0	0	0
IV Non-Homestead	72	0	13	6	3	6	0
All Farms	73	0	9	12	2	4	0

<sup>a</sup>First response to Question #44 - Which of the following has given you the greatest difficulty on this farm? (Limited choice of answers.)

Table xiva

GREATEST DIFFICULTIES ON FARMS EXPERIENCED BY FARM OPERATORS,<sup>a</sup> I.D. 126, 1967

Initial Tenure Status	Lack of Capital	Lack of Experience	Poor Soil	Poor Weather	Insufficient Land	Other than above	No Response
I Homestead Sale	20%	4%	8%	36%	12%	0%	20%
II Civilian Homestead	10	0	10	39	26	10	5
III Veteran Homestead	8	8	0	42	17	8	17
IV Non-Homestead	9	3	6	38	34	3	7
All Farms	12	3	7	38	24	5	11

<sup>a</sup>Second response to Question #44.



Table xivb

GREATEST DIFFICULTIES ON FARMS EXPERIENCED BY FARM OPERATORS,<sup>a</sup> I.D. 126, 1967

Initial Tenure Status	Lack of Capital	Lack of Experience	Poor Soil	Poor Weather	Insufficient Land	Other than above
I Homestead Sale	96%	4%	12%	48%	16%	4%
II Civilian Homestead	76	0	24	60	26	12
III Veteran Homestead	100	8	0	50	18	8
IV Non-Homestead	82	4	20	44	38	8
All Farms	86	4	16	50	26	8

<sup>a</sup>Total responses to Question #44. (Some operators gave two responses.)





Table xv

THE BIGGEST PROBLEMS CONFRONTING FARMS IN THE AREA TODAY  
AS SEEN BY FARM OPERATORS,<sup>a</sup> I.D. 126, 1967

Initial Tenure Status	Lack of Capital	High Cost of Mach.	Poor Weath- er	Cost- Price Squeeze	Poor Market Facil.	Lack of Infra- struct. <sup>b</sup>	Insuff- icient Land	High Cost of Land Clearing	Other Prob- lems	No Respon- se
I Homestead Sale	40%	24%	9%	8%	4%	12%	4%	0%	0%	0%
II Civilian Homestead	17	19	13	6	17	3	3	7	9	6
III Veteran Homestead	33	8	25	25	0	0	0	0	8	0
IV Non- Homestead	13	16	22	28	9	0	6	3	3	0
All Farms	23	18	16	16	9	4	4	3	5	2

<sup>a</sup>First response to Question #45 - What are the biggest problems confronting farmers today in I.D. 126?  
(Open-end responses, post-coded.)

<sup>b</sup>Infrastructure - roads, drainage, running water, electricity.



Table xva

THE BIGGEST PROBLEMS CONFRONTING FARMS IN THE AREA TODAY  
AS SEEN BY FARM OPERATORS, a I.D. 126, 1967

Initial Tenure Status	Lack of Capital	High Cost of Mach.	Poor Weather	Cost-Price Squeeze	Poor Market Facil-	Lack of Infra-struct. <sup>b</sup>	Insuff-icient Land	High Cost of Land Clearing	Other Prob-lems	No Resp-onse
I Homestead Sale	44%	32%	16%	16%	8%	20%	4%	8%	4%	0%
II Civilian Homestead	20	30	16	10	20	10	6	6	24	6
III Veteran Homestead	50	8	34	26	8	8	0	0	8	0
IV Non-Homestead	30	28	28	32	22	0	8	2	8	0
All Farms	32	28	22	20	16	10	6	6	10	2

<sup>a</sup>Total responses to Question #45. (Some operators gave two responses.)



Table xvi

PROPORTION OF OPERATORS IN TAX APREARS,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Farm Operators in Tax Arrears
I Homestead Sale	44%
II Civilian Homestead	23
III Veteran Homestead	42
IV Non-Homestead	44
All Farms	37

Table xvii

FARM OPERATORS' ASSESSMENT OF FARMING EXPERIENCE AND KNOWLEDGE OF  
PROSPECTIVE HOMESTEADERS,<sup>a</sup> BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Experience			Knowledge		
	Adequate	Not Adequate	Undecided	Adequate	Not Adequate	Undecided
I Homestead Sale	56%	40%	4%	56%	40%	4%
II Civilian Homestead	29	61	10	65	23	13
III Veteran Homestead	17	83	0	83	8	8
IV Non-Homestead	44	44	13	56	28	16
All Farms	39	53	8	62	27	11

<sup>a</sup>Question #50 - Would you say that operators have adequate experience and knowledge of farming conditions in this area?





Table xviii

FARM OPERATORS' OPINIONS ON SATISFYING THE REQUIREMENTS OF THE HOMESTEAD POLICY,<sup>a</sup>  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Residence		Cultivation		Payments	
	Easy	Not easy	Undecided	Easy	Not easy	Undecided
I Homestead Sale	52%	36%	12%	60%	36%	4%
II Civilian Homestead	55	45	-	52	45	3
III Veteran Homestead	33	67	-	50	42	8
IV Non-Homestead	38	50	12	34	53	13
All Farms	46	47	7	48	45	7
				48%	40%	12%
				55	35	10
				58	42	-
				41	44	15
				49	35	11

<sup>a</sup>Question #51 - Do operators find it relatively easy to satisfy the requirements of the homesteading policy?



Table xix

AVERAGE SIZE OF FARM CONSIDERED NECESSARY FOR SUCCESS,  
BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Farm Size <sup>a</sup>		
	Acreage	Capital	Gross Farm Income
I Homestead Sale	562	\$40,083	\$12,828
II Civilian Homestead	596	52,586	15,607
III Veteran Homestead	603	41,667	14,833
IV Non-Homestead	613	53,563	13,850
All Farms	595	48,464	14,503
Number of responses	99	97	94
Standard Deviation	191	31,359	6,847
Minimum	300	5,000	1,400
Maximum	1,500	200,000	40,000

<sup>a</sup>Response to Question #47 - In your opinion what size of farm would be enough to make farming a success in I.D. 126?



Table xx

OPERATORS' RECOMMENDATIONS FOR POLICY CHANGES,<sup>a</sup> BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Provide adequate drainage, roads, etc.	Provide more credit	Lower price of raw land	Minimize specul- ation	Improve land before release	Relax duties during crop fail.	Increase size of homestead	Provide more tech. advice	Other recomm.	No response
I Homestead	17%	8%	17%	4%	4%	8%	4%	4%	13%	21%
II Civilian Homestead	13	19	13	10	10	6	6	0	19	3
III Veteran Homestead	33	17	17	8	8	0	0	0	0	17
IV Non- Homestead	16	16	3	13	6	9	0	0	28	9
All Farms	17	15	11	9	7	7	3	1	18	11

<sup>a</sup>First response to Question #48 - What policy changes would you recommend to improve homesteading in I.D. 126?





Table 12a

OPERATORS' RECOMMENDATIONS FOR POLICY CHANGES,<sup>a</sup> BY INITIAL TENURE STATUS, I.D. 126, 1967

Initial Tenure Status	Provide adequate drainage, roads, etc.	Provide more credit	Lower prices of raw land	Minimize specul- ation	Improve land before release	Relax duties during crop fail.	Increase size of homestead	Provide more tech. advice	Other recommen- dations
I Homestead Sale	34%	34%	34%	16%	24%	16%	8%	8%	24%
II Civilian Homestead	52	44	32	24	28	12	12	12	52
III Veteran Homestead	116	34	50	16	16	0	0	16	16
IV Non- Homestead	32	56	8	36	20	32	8	8	68
All Farms	50	50	24	32	22	20	8	8	50

<sup>a</sup>Total responses to Question #48. (Some operators gave two responses.)



Table xxi

ESTIMATED CURRENT MARKET VALUE OF FARM ASSETS FOR SELECTED FARMS,  
BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Number of Farms Reporting	Real Estate	Machinery & Equip.	Other Assets <sup>a</sup>	Total Assets
(\$ per farm)					
I Homestead Sale	20	\$19,370	\$7,432	\$289	\$27,091
II Civilian Homestead	20	28,558	10,940	4,640	44,138
III Veteran Homestead	10	36,600	10,721	697	48,012
IV Non-Homestead	27	39,298	10,521	7,001	56,820
All Farms	77	32,280	9,851	4,530	44,661

<sup>a</sup>Includes livestock.

Table xxia

COMPOSITION OF TOTAL FARM ASSETS FOR SELECTED FARMS,  
BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Number of Farms Reporting	Real Estate	Machinery & Equip.	Other Assets <sup>a</sup>
I Homestead Sale	20	71%	27%	2%
II Civilian Homestead	20	65	25	10
III Veteran Homestead	10	76	22	2
IV Non-Homestead	27	69	19	12
All Farms	77	69	22	9

<sup>a</sup>Include livestock.



Table xxib

ESTIMATED MARKET VALUE AND COMPOSITION OF FARM REAL ESTATE  
FOR SELECTED FARMS, BY INITIAL TENURE STATUS,  
I.D. 126, 1966<sup>a</sup>

Initial Tenure Status	Number of Farms Reporting	Estimated Market Value			Percent Total	
		Land	Build- ings	Total Real Estate	Real Estate Land	Build- ings
(\$ per farm)						
I Homestead Sale	19	\$16,086	\$4,189	\$20,275	79%	21%
II Civilian Homestead	12	18,113	5,150	23,263	78	22
III Veteran Homestead	7	29,286	7,229	36,515	80	20
IV Non-Homestead	17	27,362	9,899	37,261	73	27
All Farms	55	21,694	6,551	28,245	77	23

<sup>a</sup>Table summarizes the response of 55 farmers who estimated the value of land and buildings separately.

Table xcii

NONFARM INCOME INVESTED IN FARM DURING OCCUPANCY,  
BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Total	Annual
I Homestead Sale	\$1,434	\$205
II Civilian Homestead	6,400	356
III Veteran Homestead	10,533	810
IV Non-Homestead	5,906	537
All Farms	5,496	458
Standard Deviation	12,644	
Minimum	0	
Maximum	84,000	





Table xxiii

VALUE OF FARM MACHINERY PURCHASED DURING OCCUPANCY,  
BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Total	Annual
I Homestead Sale	\$8,183	\$1,169
II Civilian Homestead	15,344	852
III Veteran Homestead	11,633	895
IV Non-Homestead	14,587	1,326
All Farms	12,866	1,072
Standard Deviation	11,978	
Minimum	0	
Maximum	61,000	



Table xciiv

## GROSS FARM INCOME COMPOSITION, BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Wheat	Oats	Barley	Rape- seed	Flax- seed	Forage Seed	Other Crops	Live- stock	Other Farm Receipts	Income in Kind	Total
I Homestead Sale	\$555	\$107	\$384	\$128	\$170	\$0	\$0	\$192	\$449	\$150	\$2,135
II Civilian Homestead	1,159	695	309	618	464	1,391	255	2,215	397	224	7,727
III Veteran Homestead	1,413	264	944	682	75	1,066	0	2,068	444	212	7,168
IV Non- Homestead	545	61	545	363	121	182	153	3,078	501	507	6,056
All Farms	859	287	458	401	229	630	152	1,968	449	294	5,727



Table xxv

## FARM EXPENSES, BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure	Number of Farms	Taxes	Int.	Cash Rent	Depre- ciation	Mach. Expense	Wages	Live- stock Expense	Crop Expense	Other Farm Expense	Total
I Homestead Sale	24	\$90	\$110	\$87	\$1,009	\$990	\$345	\$69	\$333	\$237	\$3,270
II Civilian Homestead	24	171	173	76	1,364	1,104	724	226	442	330	4,610
III Veteran Homestead	10	290	231	101	976	1,296	473	189	244	447	4,247
IV Non- Homestead	31	209	558	133	1,328	981	360	758	688	678	5,695
All Farms	89	176	297	102	1,212	1,052	467	364	476	440	4,586





Table xxvi

SOURCES OF OFF-FARM INCOME,  
BY INITIAL TENURE STATUS, I.D. 126, 1966

Initial Tenure Status	Wage			Family Allowance	Pension	Other Income	Total
	Operator	Wife	Children				
(\$ per Farm)							
I Homestead Sale	\$3,840	\$425	-	\$100	\$58	\$24	\$4,447
II Civilian Homestead	2,108	186	\$42	60	54	255	2,705
III Veteran Homestead	1,926	125	42	104	545	2	2,744
IV Non- Homestead	2,138	365	170	147	87	204	3,111
All Farms	2,529	296	129	110	125	82	3,275



Table xxvii

CORRELATION COEFFICIENTS, I.D. 126, 1966

[illegible]



Table xxvii (continued)

	X <sub>11</sub>	X <sub>12</sub>	X <sub>13</sub>	X <sub>14</sub>	X <sub>15</sub>	X <sub>16</sub>	X <sub>17</sub>	X <sub>18</sub>	X <sub>19</sub>	X <sub>20</sub>
X <sub>1</sub>	.151	.185	.124	.190	.114	.224*	.095	-.208*	.102	-.045
X <sub>2</sub>	.137	.327*	.160	-.015	.272*	.226*	.319*	-.153	.286*	.345*
X <sub>3</sub>	.135	.192	.174	.010	.062	.060	.234*	-.176	.069	.213*
X <sub>4</sub>	.139	.149	.164	.018	.056	.079	.234*	.069	.213	.421*
X <sub>5</sub>	-.034	-.070	-.073	-.047	-.032	-.052	-.146	-.198*	-.113	.016
X <sub>6</sub>	.095	.086	.049	.024	.087	.088	.010	-.215*	.044	.068
X <sub>7</sub>	.147	.085	.158	.051	.126	.147	.170	.122	.229*	.196*
X <sub>8</sub>	-.125	.194	-.005	-.127	.011	.046	.041	.034	.085	.032
X <sub>9</sub>	.078	.173	.031	.073	.106	.146	.191	.145	.194	.127
X <sub>10</sub>	-.021	.032	-.016	.014	-.050	-.008	.059	.309*	.126	.112
X <sub>11</sub>		.754*	.960*	.609*	.265*	.658*	.748*	.128	.714*	.465*
X <sub>12</sub>			.769*	.736*	.407*	.856*	.796*	.039	.842*	.442*
X <sub>13</sub>				.615*	.226*	.636*	.737*	.194	.668*	.463*
X <sub>14</sub>					-.057	.721*	.610*	.133	.618*	.155
X <sub>15</sub>						.636*	.422*	-.213*	.507*	.242*
X <sub>16</sub>							.788*	-.032	.830*	.291*
X <sub>17</sub>								.189	.773	.495*
X <sub>18</sub>									.075	.278*
X <sub>19</sub>										.540*

(See Table 18 for key to subscripts.)





APPENDIX

B



CONFIDENTIAL  
Study of Land Settlement in Alberta

Department of Agricultural Economics  
University of Alberta  
Edmonton

Operator's name \_\_\_\_\_ Q. No. \_\_\_\_\_  
Address \_\_\_\_\_ Interviewer \_\_\_\_\_  
T \_\_\_\_\_ R \_\_\_\_\_ S \_\_\_\_\_ W. of \_\_\_\_\_ Date \_\_\_\_\_

1. How long have you been operating this farm? \_\_\_\_\_
2. How did you begin operating this farm?  
Homestead Sale  
Civilian Homestead Lease  
Veteran Homestead Lease  
Private Lease  
Cash Purchase  
Other than above
3. Are you an owner?  
Part owner?  
Tenant?  
Manager?
4. When you took over was some of the land cleared and/or broken?  
Yes \_\_\_ No \_\_\_  
If yes, how much was cleared and/or broken? \_\_\_\_\_  
Do you think that the initial clearing and/or breaking have  
contributed significantly to the success of your farm? Yes \_\_\_ No \_\_\_
5. a) How much capital did you have initially when you took over  
this farm? \_\_\_\_\_  
b) How much of this capital was owned? \_\_\_\_\_ Borrowed? \_\_\_\_\_

Characteristics of Farm Family

6. a) Did you grow up on a farm? Yes \_\_\_ No \_\_\_  
b) How big was the farm? \_\_\_\_\_  
c) What kind of farm was it?  
Dairy  
Beef  
Other L.S.  
Crops  
Mixed  
d) How many years of farming experience do you have? \_\_\_\_\_
7. Were the farming conditions (climatic) similar to those on this  
farm? Yes \_\_\_ No \_\_\_
8. Was your wife raised on a farm? Yes \_\_\_ No \_\_\_
9. In what year were you born? \_\_\_\_\_



10. What is the ethnic or national origin of your mother? \_\_\_\_\_  
father? \_\_\_\_\_
11. Within the past 10 years, have you held office in the following organizations?  
Church  
Farm Cooperative  
Farm Organization  
School Board  
Chamber of Commerce  
Other than above
12. a) What was the last grade you completed at school? \_\_\_\_\_  
College? \_\_\_\_\_ University? \_\_\_\_\_  
b) What was the last grade your wife completed at school? \_\_\_\_\_  
College? \_\_\_\_\_ University? \_\_\_\_\_
13. Do you have any nonfarm experience? Yes \_\_\_ No \_\_\_  
Professional/Managerial  
Skilled  
Unskilled
14. Since you took over this farm have you held permanent jobs off the farm?  
Frequently  
Occasionally  
Seldom  
Never
15. How many children do you have?  
Sex      Year      Grade      Institute/      Occupation      Residence  
         Born      Completed      University           (on farm)
16. Which members of your family assist with the farm work?  
Frequently      Occasionally      Seldom      Never  
Wife  
Sons  
Daughters
17. Do you hire extra labour? Yes \_\_\_ No \_\_\_  
Do you experience any difficulty in obtaining extra labour?  
Yes \_\_\_ No \_\_\_





Housing

18. Tell me about the condition of your house.

- |   |                      |               |
|---|----------------------|---------------|
| a | Age                  | Television    |
|   | Number of bedrooms   | Running water |
| b | Type of construction | Power washer  |
| c | General condition    | Refrigerator  |
|   | Electricity          | Flush toilet  |
|   | Telephone            | Indoor bath   |
- a) 1. 30 yrs. and above    2. 20-29 yrs.    3. 10-19 yrs.  
      4. 5-9 yrs.               5. 4 yrs. and below
- b) 1. log    2. part-log    3. frame    4. frame-concrete  
      5. concrete
- c) 1. Poor    2. Fair               3. Good    4. Excellent

Characteristics of Farm

19. Did you own the following in 1966?

- |                      | Age | Number | Purchased New<br>Yes/No | Purchase<br>Price |
|----------------------|-----|--------|-------------------------|-------------------|
| a) Car               |     |        |                         |                   |
| b) Truck             |     |        |                         |                   |
| c) Tractor           |     |        |                         |                   |
| d) Grain combine     |     |        |                         |                   |
| e) Swather           |     |        |                         |                   |
| f) Threshing machine |     |        |                         |                   |
| g) Baler             |     |        |                         |                   |
| h) Electric motors   |     |        |                         |                   |
| i) Other major mach. |     |        |                         |                   |

20. Do you keep some kind of farm records? Yes \_\_\_ No \_\_\_

21. Location of farm.

Kindly indicate the location(s) of your holding(s) in the illustration above. Specify township, range, and meridian.

22. How many acres did you operate in 1966?

How many acres did you own?

How many acres did you rent or lease?

- a) Improved acreage (cropland, summer fallow, pasture, gardens, lanes, barnyards, etc.)
- b) Unimproved acreage (woodland, hayland, native pasture, sloughs, etc.)



23. How much livestock did you have on December 31, 1966?

- a) Cattle: Dairy  
Beef  
All others (steers, calves, etc.)
- b) Pigs
- c) Horses and ponies
- d) Sheep
- e) Poultry (chickens, turkeys, geese, etc.)

Income and Expenses

24. What was your income from crops in 1966?

Crops	Acreage	Yield	Grade	Quantity Sold	Price per bushel	Cash sales
Wheat						
Oats						
Barley						
Rapeseed						
Forage seed						
Others						

25. What was your income from livestock sales in 1966?

Livestock	Number sold	Receipts
Cattle		
Pigs		
Poultry		
Milk and cream		
Others		

26. How much supplementary payment did you receive in 1966?

- Agriculture Relief Assistance
- Prairie Farm Assistance Act
- Crop insurance
- Dividends and bonuses
- Final payments
- Other payments
- Total cash income

27. What was your income in kind?

Gross farm income

28. What were your expenses?

- Taxes
- Interest on loans, etc.
- Rent
- Depreciation
- Machinery and Equipment
- Labour
- Livestock
- Crops
- Total farm expenses
- Net farm income



29. Since you have been farming here, did you obtain any off farm income which has contributed to the success of your farm?

Yes \_\_\_ No \_\_\_ Amount \_\_\_\_\_

30. What was your off farm income for 1966?

Wage and Salary (operator)  
Wage and Salary (wife)  
Wage and Salary (children)  
Rental income (royalties, etc.)  
Other income  
Pensions  
Welfare  
Others  
Family income

Marketing

31. Where do you market your products?

	Location	Distance	Freight rate or cost per unit
Grain (bushel)			
Forage seed			
Others			
Cattle			
Pigs			
Milk and cream			

Indebtedness and Assets

32. Did you have any major debts in 1966? Yes \_\_\_ No \_\_\_

33. Source of credit.

	Amount borrowed	Amount now outstanding	Interest	Annual or Monthly Payments	Duration (years)
Banks-regular					
F.I.L.A.					
A.F.P.B.					
F.C.C.					
Vet. Land Act					
Hom. Land Act					
Fin. Corp.					
Pte. Lenders					
Merchants					

Which are your most dependable sources of credit?

List: \_\_\_\_\_

34. Could you borrow additional funds if you so desired? Yes \_\_\_ No \_\_\_

35. Would you borrow additional money if it appeared profitable?

Yes \_\_\_ No \_\_\_





36. What was the overall financial picture of your farm in 1966?

Value of land  
Value of buildings  
Value of machinery and equipment  
Value of other farm assets  
Total assets  
Total indebtedness  
Net worth

37. Are your taxes in arrears? Yes\_\_\_No\_\_\_

38. How do you rate yourself as a manager?\_\_\_  
1. Fair 2. Average 3. Very Good 4. Excellent

39. What have been your long term average crop yields?  
Wheat\_\_\_\_\_Oats\_\_\_\_\_Barley\_\_\_\_\_

40. Are you satisfied with the homestead lease? Yes\_\_\_No\_\_\_Undecided\_\_\_  
Reasons:\_\_\_\_\_

41. Are you satisfied with the homestead sale? Yes\_\_\_No\_\_\_Undecided\_\_\_  
Reasons:\_\_\_\_\_

42. Is making money one of your most important objectives? Yes\_\_\_No\_\_\_  
What other goals and objectives do you have?\_\_\_\_\_

43. Which one of the following characteristics of farming do you  
enjoy most? Living in the country  
Being your own boss  
Working with animals  
Satisfaction of growing things  
Working outdoors  
Being able to work by yourself  
Other than above

44. Which of the following has given you the greatest difficulty on  
this farm? Lack of capital  
Lack of experience  
Poor soil  
Poor weather  
Insufficient land  
Other than above

45. What are the biggest problems confronting farmers today in this  
area? \_\_\_\_\_

46. What problems will confront farmers in the future in this area?  
\_\_\_\_\_  
\_\_\_\_\_



47. In your opinion what size of farm would be enough to make farming a success in this area?

Acreage

Capital

Gross farm income

48. What policy changes would you recommend to improve land settlement in this area? \_\_\_\_\_  
\_\_\_\_\_

49. If given the authority would you continue to grant homesteads?

Yes \_\_\_ No \_\_\_ Undecided \_\_\_

50. Would you say that prospective homesteaders have adequate experience and knowledge of farming conditions in this area?

Yes                  No                  Undecided

Experience

Knowledge

51. Do operators find it relatively easy to satisfy the requirements of the homesteading policy?

Yes                  No                  Undecided

Residence duties

Cultivation duties

Payments

Others



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